

**DRAFT**

**INITIAL STUDY  
MITIGATED NEGATIVE DECLARATION**

**Mill Creek Acquisition  
Bummer Switchback Road Removal Project**

**April 2004**



State of California  
DEPARTMENT OF PARKS AND RECREATION

## MITIGATED NEGATIVE DECLARATION

**Project:** Mill Creek Acquisition  
Bummer Switchback Road Removal Project

**Lead Agency:** California Department of Parks and Recreation

**Availability of Documents:**

This Draft Initial Study/Mitigated Negative Declaration is available for review at:

California Department of Parks & Recreation  
Northern Service Center  
One Capitol Mall - Suite 410  
Sacramento, California 95814

California Department of Parks & Recreation  
North Coast Redwoods District  
3431 Fort Avenue  
Eureka, California 95503

Humboldt County Public Library  
1313 Third Street  
Eureka, California 95501

California State Parks Internet Website  
[http://www.parks.ca.gov/default.asp?page\\_id=980](http://www.parks.ca.gov/default.asp?page_id=980)

**Project Description:**

DPR proposes to make the improvements described herein to the Mill Creek Acquisition (MCA) watersheds. The following is a summary of the planned improvements:

**1) Full Road Recontouring**

The project would implement full road recontouring on approximately 17.5 miles of abandoned, unstable inner-gorge, mid-slope and ridge top service and skid roads within the Mill Creek Watersheds. The work would include excavation of embankment fill from roads and stabilization of excavated materials on cutbench to fully recontour natural (pre-disturbance) topography.

**2) Stream Crossing Removal**

The project includes removal of fill material from 109 stream crossings associated with the service and skid roads indicated above. The majority of the crossings would have no flow during the proposed construction season and are typically small fill crossings. Stream crossing removal would include removal of road and landing fill from stream channels and floodplains. Placing excavated material against nearby road cut slopes and recontouring to match the natural slopes would stabilize the crossings. Stream channel bed, banks, and adjacent slopes would be restored to their pre-crossing configuration. Longitudinal stream gradient would be reestablished through the crossing site.

A copy of the Initial Study is incorporated into this Mitigated Negative Declaration. Questions or comments regarding this Initial Study/Mitigated Negative Declaration may be addressed to:

Shaelyn Raab Strattan  
California Department of Parks & Recreation  
Northern Service Center  
One Capital Mall - Suite 500  
Sacramento, CA 95814

Submissions must be in writing and postmarked or received by fax or email no later than May 15, 2003. The originals of any faxed document must be received by regular mail within ten working days following the deadline for comments, along with proof of successful fax transmission.

Pursuant to Section 21082.1 of the California Environmental Quality Act, the California Department of Parks and Recreation (DPR) has independently reviewed and analyzed the Initial Study and Mitigated Negative Declaration for the proposed project and finds that these documents reflect the independent judgment of DPR. DPR, as lead agency, also confirms that the project mitigation measures detailed in these documents are feasible and will be implemented as stated in the Final Mitigated Negative Declaration.

\_\_\_\_\_  
Kathy Amann, Service Center Manager, for  
John Kolb, District Superintendent  
North Coast Redwood District - California State Parks

April 15, 2004  
Date

## TABLE of CONTENTS

<b><u>Chapter/Section</u></b>	<b><u>Page</u></b>
<b>1</b> Introduction.....	3
<b>2</b> Project description.....	7
<b>3</b> Environmental checklist.....	19
I. Aesthetics.....	19
II. Agricultural Resources.....	21
III. Air Quality.....	23
IV. Biological Resources.....	25
V. Cultural Resources.....	35
VI. Geology and Soils.....	37
VII. Hazards and Hazardous Materials.....	41
VIII. Hydrology and Water Quality.....	45
IX. Land Use and Planning.....	53
X. Mineral Resources.....	57
XI. Noise.....	59
XII. Population and Housing.....	61
XIII. Public Services.....	63
XIV. Recreation.....	65
XV. Transportation/Traffic.....	67
XVI. Utilities and Service Systems.....	69
<b>4</b> Mandatory Findings of Significance.....	71
<b>5</b> Summary of Mitigation Measures.....	73
<b>6</b> References.....	80

### **Appendices**

- A** Maps
- B** Project Design Graphics
- C** Sensitive Species List
- D** Acronyms

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## **Chapter 1 Introduction**

### **1.1 Introduction and Regulatory Guidance**

The Draft Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Bummer Switchback Road Removal Project at the Mill Creek Acquisition (MCA), Del Norte County, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 *et seq.*, and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 *et seq.*

An Initial Study is conducted by a lead agency to determine if a project may have a significant effect on the environment [CEQA Guidelines §15063(a)]. If there is substantial evidence that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the lead agency determines that revisions in the project plans or proposals made by or agreed to by the applicant mitigate the potentially significant effects to a less-than-significant level, a Mitigated Negative Declaration (MND) may be prepared instead of an EIR [CEQA Guidelines §15070(b)]. The lead agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS/MND conforms to the content requirements under CEQA Guidelines §15071.

### **1.2 Lead Agency**

The lead agency is the public agency with primary approval authority over the proposed project. In accordance with CEQA Guidelines §15051(b)(1), "the lead agency would normally be an agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed project is DPR. The contact person for specific project information for the lead agency is:

Brian R Merrill  
Roads, Trails, and Resources  
North Coast Redwoods District  
3431 Fort Avenue  
Eureka, California 95503  
Phone: (707) 445-5344

Mailing: P.O. Box 2006  
Eureka, California 95502

Any questions or comments related to this environmental document should be directed to:

Shaelyn Raab Strattan  
Department of Parks and Recreation  
Acquisition and Development Division  
One Capital Mall - Suite 500  
Sacramento, California 95814  
FAX: (916) 445-9100  
Email: [ceqansc@parks.ca.gov](mailto:ceqansc@parks.ca.gov) - Attn: Shaelyn Strattan

### **1.3 Purpose and Document Organization**

The purpose of this document is to evaluate the potential environmental effects of the proposed Bummer Switchback Road Removal Project in the MCA. Mitigation measures have also been incorporated into the project to eliminate any potentially significant impacts or reduce them to a less than significant level.

This document is organized as follows:

#### **Chapter 1 - Introduction**

This chapter provides an introduction to the project and describes the purpose and organization of this document.

#### **Chapter 2 - Project Description**

This chapter describes the reasons for the project, scope of the project, and project objectives.

#### **Chapter 3 - Environmental Setting, Impacts, and Mitigation Measures**

This chapter identifies the significance of potential environmental impacts, explains the environmental setting for each environmental issue, and evaluates the potential impacts identified in the CEQA Environmental Checklist. Mitigation measures are incorporated, where appropriate, to reduce potentially significant impacts to a less than significant level.

#### **Chapter 4 – Mandatory Findings of Significance**

This chapter identifies and summarizes the overall significance of any potential impacts to the natural and cultural resources, cumulative impacts and impacts to humans, as identified in the Initial Study.

#### **Chapter 5 - Summary of Mitigation Measures**

This chapter summarizes the mitigation measures incorporated into the project as a result of the Initial Study.

#### **Chapter 6 - References**

This chapter identifies the references and sources used in the preparation of this IS/MND, and includes a list of report preparers.

### **1.4 Summary of Findings**

Chapter 3 of this document contains the Environmental Checklist that identifies the potential environmental impacts (by environmental issue) and a brief discussion of each impact resulting from implementation of the proposed project. Based on the Environmental Checklist and the supporting environmental analysis provided in this document, the proposed Bummer Switchback Road Removal Project at MCA would result in less than significant impacts for the following issues: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems, and cumulative impacts.

In accordance with §15064(f) of the CEQA Guidelines, a MND shall be prepared if the proposed project would not have a significant effect on the environment after the inclusion of mitigation measures in the project. Based on the available project information and the environmental analysis presented in this document, there is no substantial evidence that, after the incorporation of mitigation measures, the proposed project would have a significant effect on the environment. It is proposed that a Mitigated Negative Declaration be adopted in accordance with the CEQA Guidelines.

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## **Chapter 2**

### **Project Description**

#### **2.1 Introduction**

This Mitigated Negative Declaration (MND) evaluates the environmental effects of the proposed Bummer Switchback Road Removal Project. This project would perform full road recontouring of approximately 17.5 miles of abandoned, unstable inner-gorge service and skid roads within the Mill Creek and Rock Creek Watersheds. The roads proposed for removal are in an area known as “Bummer Spurs” and “4<sup>th</sup> Switchback.” The work would include excavation of road embankment fill and stabilization of the excavated materials on the remaining road cut bench. The process is designed to fully recontour the road to match the natural (pre-disturbance) topography. The project would also remove fill material from 109 stream crossings associated with those service and skid roads. Stream crossing removal would include removal of road and landing fill from stream channels and floodplains. During crossing removal, excavated materials are stabilized on the adjacent road cut bench. Stream channel bed, banks, and adjacent slopes would be restored to their pre-crossing configuration and longitudinal stream gradient would be reestablished throughout the crossing site. The project is intended to diminish the impacts of abandoned roads to the natural resources of the MCA and associated watersheds.

#### **2.2 Project Location**

The Mill Creek Acquisition (MCA) is located in the coastal mountains of northwestern Del Norte County. The project area lies about 10 miles southeast of Crescent City and is in the east-central portion of the 25,000 acre MCA. Highway 101 runs along the western edge of the present park boundary. The MCA is within the North Coast Redwoods District of California State Parks.

The work proposed as part of this project would take place in Rock Creek and Mill Creek watersheds, which drain into the Smith River (T 15 N, R 1 E, Sections 1, 2, 3, 4, 9, 10, 11, 12, 13; T 15 N, R 2 E, Sections 6, 7, 18; and T 16 N, R 1 E, Section 34, Humboldt Meridian). Access to the project site from Eureka is via Highway 101 north. The main access to the project, Hamilton Road, is located 2 miles north of Mill Creek Campground on Highway 101. To access the project, travel east 1/2 mile on Hamilton Road to a locked gate. Beyond the gate, proceed approximately 5 miles to Child's Hill Road. The project area can be accessed from various points along Childs Hill Road between miles 5.9 and 10.0. Access during construction is from 4<sup>th</sup> Switchback, Bummer Spurs, and AJ spur roads. The access roads within the park are closed seasonally and may not be drivable during winter due to wet and muddy road surfaces.

#### **2.3 Background and Need for the Project**

The extensive network roads in the Mill Creek watershed has resulted in concentration of surface runoff and the diversion of streams onto unstable slopes. This concentration of flow has resulted in road failures and unnatural landslides delivering massive volumes of sediment into the adjacent streams. The influx of sediments is known to degrade aquatic habitat and adversely affect water quality. The primary purpose of this project is to diminish the impacts of sediment delivery from these roads to the aquatic habitat of the MCA.

The road removal sites are completely within an area that was managed for timber production prior to DPR ownership. The sites contain a dense network of haul roads that were abandoned after logging operations ceased in the late 1990's. The sites have numerous unstable stream crossings, many of which have a high diversion potential. Many of the roads are insloped or have berms, which interrupt and concentrate runoff onto slopes prone to landslides. Lack of maintenance to those sections of road network proposed for removal has resulted in gullies and landslides. Numerous active landslides intersect the roads and many are located directly upslope from stream channels.

The project would improve habitat conditions for fish, wildlife, and plant populations. Listed Coho salmon and other salmonids would benefit from a reduction in sediment delivery to spawning and rearing habitat. This project would improve habitat for Coho and Chinook salmon, and Steelhead by restoring the natural surface hydrology and eliminating stream diversions and runoff concentrations that cause gullies and landslides. Amphibians would benefit from an increase in suitable habitat, as well as a reduction in sediment delivery to potential habitat. In addition, DPR's goal of restoring natural vegetation patterns and improving conditions for natural slope processes would be aided by re-establishing natural drainage patterns, recontouring of old roadways, and reducing unnatural landslides.

## **2.4 Project Objectives**

The primary objective of the proposed project is to protect park resources through the use of road recontouring to:

- Eliminate interception and diversion of runoff on the road surface.
- Prevent erosion of road embankment fill.
- Prevent direct sediment delivery to the drainage network from failed embankment fill.
- Prevent runoff diversions that cause severe gulying on roads and slopes.
- Prevent mass movements caused by diverted flow directed onto interfluvial slopes.
- Re-establish the natural landform and original hydrology.
- Eliminate direct linkage between streams and roads.
- Eliminate road surface areas that collect water.

## **2.5 Project Description**

DPR proposes to make the improvements described herein to the Rock Creek and Mill Creek Watersheds within the MCA. The following is a summary of the planned improvements: The Rock Creek and Mill Creek watersheds contain a dense network of haul roads that were abandoned after logging operations ceased in the late 1990's prior to DPR ownership. Road failures and unnatural landslides caused by the diversion of streams and concentration of surface runoff has resulted in the degradation of aquatic habitat for threatened anadromous fish species and sensitive amphibians. In some

areas, bank erosion caused by excessive sediment loads has resulted in the toppling of riparian trees. The purpose of this project is to diminish the impacts of these roads to the natural resources of the State Park system. The following work is proposed as part of this project:

1. Implement full or partial road recontouring on approximately 17.5 miles of road.
2. Removal of fill material from 109 stream crossings associated with the service and skid roads.
3. Stabilize approximately 96,000 cubic yards of road and crossing fill that is potentially deliverable to streams if left untreated.

### **Full Road Recontouring**

Perform full road recontouring of approximately 12 miles of abandoned, unstable mid-slope and upper-slope service and skid roads within the Mill Creek and Rock Creek Watersheds. The work would include excavation of road embankment fill and stabilization of the excavated materials on the remaining road cut bench. The process is designed to fully recontour the road to match the natural (pre-disturbance) topography. The project would stabilize approximately 17,000 cubic yards of road fill that is potentially deliverable to streams if left untreated and eliminate runoff diversions along roadways.

### **Partial Road Recontouring**

Perform partial road recontouring of approximately 5.5 miles of abandoned, unstable lower-slope and inner-gorge service and skid roads within the Mill Creek and Rock Creek Watersheds. The work would include excavation of a portion of the road embankment fill and stabilization of the excavated materials on the remaining road cut bench. The process is designed to partially recontour the road to match the natural (pre-disturbance) topography while unloading potentially unstable embankment fills. The project would stabilize approximately 7,900 cubic yards of road fill that is potentially deliverable to streams if left untreated.

### **Stream Crossing Removal**

Remove fill material from 109 stream crossings associated with the haul roads indicated above. The average length of stream channel affected by crossing removal is approximately 100 feet in length and ranges from 60 to 250 feet. The majority of the crossings have no flow during the construction season and are typically small fill crossings. Stream crossing removal includes excavation of road and landing fill from road/stream channel crossings and stabilization of excavated materials. Stream channel bed, banks, and adjacent slopes would be restored to their pre-crossing configuration, except where post-logging incision, stream diversion or bank instability requires unique design, and longitudinal stream gradient reestablished through the crossing site. Project would remove approximately 71,300 cubic yards of potentially deliverable sediment from these stream-crossing sites.

See Section 2.6 (Project Construction) below for details on the actual construction process.

## 2.6 Project Construction

The construction window for this project would extend from June 1 to October 15<sup>th</sup> of 2004, 2005, 2006 and 2007. Up to four crews of three people, using heavy construction equipment would perform the proposed work. Individual service vehicles would also be on-site during construction.

Heavy equipment work would utilize a bulldozer (ranging in class from D-6 to D-8), to push fill up steep slopes and shape/finish slopes, and an excavator (ranging in class from 50,000 to 100,000 pounds) to excavate and shape/finish slopes while sitting on steep slopes. A geologist or qualified geology intern, under the supervision of a geologist, would oversee all heavy equipment work for appropriate design and adherence to the North Coast Redwood District's (NCRD's) Best Management Practices (BMPs).

### Construction Techniques for Full Road Recontouring:

- The excavator and dozer would work together to prepare the site by first removing all trees and brush growing on the cutbank, roadbed, and embankment. These materials, as mulch, would be stockpiled on the top of the cutbank or below the embankment fill. Mulch may be piled, but would be left accessible to the excavator when earthmoving tasks are complete. Trees growing in undisturbed soil that were partially buried by road embankment fill may be left standing; however, embankment fill would be excavated away from the base. Care would be taken to protect roots. An excavator-mounted vegetation masticator may be used to remove trees and brush. Tree boles would be left at least 24" high for later extraction with the excavator or dozer. If a masticator is used, a dozer may be employed to accumulate and pile ground mulch for use on finished surfaces.
- Following clearing operations, a dozer equipped with rippers would decompact the inboard ditch and cutbench portion of the road, to a minimum depth of 12 inches. The cutbank would be stripped of all organic accumulations, using the dozer or the excavator or a combination of both, except where spring flow or seepage may support aquatic species. Small amounts of organic material, such as small twigs, leaves, and decomposed humus, may be incorporated into the fill material and used to recontour the cutbench.
- If stable areas exist along the road cutbench, the dozer would begin pushing embankment fill into the cutbank in maximum 6-inch lifts. The dozer would continue to push material against the cutbank, compacting it in lifts until the material becomes too steep on which to operate, or no more fill is available locally or site-specific design calls for lesser finished grades. As the dozer cuts embankment fill, it would leave a berm on the outside edge to prevent material from being sidecast downslope.
- The excavator would follow the dozer and make a pass to remove the berm and what remains of the embankment fill beyond. The excavator could complete the slope match at the top of the cutbank. Where a complete match is not possible due to a deficit of fill material, the excavator would pull down the top corner of the cutbank, up to 6 feet where practical, and blend with the fill below.
- Where recontoured slopes permit, the final surface would be smoothed by back-dragging with the dozer blade, or by sliding the back of the excavator bucket back and

forth across the recontoured slope. Trees and brush removed prior to excavation would be raked across the surface with the excavator to remove the equipment tracks, then spread evenly over the surface as mulch.

- Cutbanks exposing seeps or springs would not be recontoured. Instead, the embankment fill adjacent to the wet area would be exported to a nearby dry section of the road. An outsloped cutbench would extend along all wet road sections. All vegetation within 25-feet of the seep or spring would be retained with the exception of any vegetation on the roadbed.
- If a long section of road is not suitable for full recontouring, the excavator would remove the embankment fill and load it into dump trucks to be hauled to a stable location. The excavator and dozer would recover the entire embankment fill and outslope the cutbench of the road. On roads with steep linear grades, broad swales would be constructed along the road at appropriate locations to convey flow into natural drainage features below the road.
- Road sections immediately adjacent to stream crossings would not be fully recontoured. Instead, the fill would be tapered toward the crossing and the exposed cutbank laid-back to a more stable slope. This would reduce the slope on each side of the crossing, lessening the chance for direct sediment delivery if a post-treatment slope failure occurs.

#### Construction Techniques for Partial Road Recontouring

- Partial road recontouring follows the same steps as full road recontouring. However, with partial recontouring only the upper portion of the embankment fill would be recovered and backfilled into the cutbank. This reduces the driving force exerted on the embankment and has the added benefit of reducing the potential instability found in fully recontoured roads. If decayed woody debris is located during the excavation of the embankment, the embankment affected by the weak material would be fully excavated and the fill would be distributed along the road so as not to overload any single location.

#### Construction Techniques for Stream Crossing Removal:

- The excavator would prepare the site by first removing all trees and brush growing on the cutbank, roadbed, and embankment of the adjacent road sections. Trees and brush growing on the crossing fill upstream sediment wedge would also be removed and used as mulch. Mulch would be stockpiled on the top of the adjacent road cutbanks or elsewhere in the crossing excavation area. Mulch may be stockpiled in piles, but would be left accessible to the excavator when earthmoving tasks are complete. Trees growing in undisturbed soil that were partially buried by fill may be left standing; however, fill would be excavated away from around the base. Care would be taken to protect roots. An excavator-mounted vegetation masticator may be used to remove trees and brush. Tree boles would be left at least 24" high for later extraction with the excavator or dozer. If a masticator is used, a dozer may be employed to accumulate and pile ground mulch for use on finished surfaces.
- If the stream has running water capable of transporting sediment, it would be diverted away from excavation areas to reduce turbidity. Where channel widths are wide

enough, a berm would be constructed to divert water away from the work area. Where channels are narrow, a small diversion dam would be built upstream and stream flow piped around the worksite and discharged into the stream below the worksite. Instream fabric filters would be installed downstream of crossing sites, where diversion is not possible.

- If the crossing has already partially failed and access is required to the opposite side, a small road bench would be reconstructed along the upstream end of the crossing, to allow access to both sides of the crossing. A minimal amount of fill would be used and streamflow (if present) piped around the site or a culvert is installed to convey streamflow under the temporary road. Brush mats would be used in dry crossings to convey flow during unseasonable runoff through the temporary crossings.
- Following clearing operations, a dozer equipped with rippers would decompact the inboard ditch and cutbench portion of the adjacent road sections, to a minimum depth of 12 inches. The cutbank would be stripped of all organic accumulations, using the dozer or the excavator or a combination of both. Small organic material would be evenly distributed and incorporated into the fill material and used to recontour the cutbench.
- If stable areas exist along the adjacent road cutbench, the dozer would begin pushing the crossing fill into the cutbank of the adjacent road sections, in maximum 6-inch lifts. The dozer would continue to push material out of the crossing, compacting it in lifts until the material becomes too steep on which to operate; the dozer reaches the local Ordinary High Water elevation; or no more fill is available in the crossing. As the dozer cuts crossing fill, it would leave a berm on the downstream edge to prevent material from being sidecast downslope toward the stream.
- As the dozer begins the crossing excavation, the excavator would position itself at the downstream edge of crossing and begin removing fill and placing it where the bulldozer can push it to the storage area. In crossing excavations where stream flow is present, the excavator would work from the downstream extent of excavation to the upstream extent, to prevent pooling and uncontrolled release of water and sediment. If the adjoining road is not suitable for material storage, the excavator would remove the crossing fill and load it directly into dump trucks; and material would be hauled to a stable location.
- The dozer and excavator would continue to work in tandem until all crossing fill on the adjacent slopes has been removed. The excavation would be designed to match the slopes and banks upstream and downstream from the crossing. In cases where the failed crossing includes a large inner-gorge gully or has incised below pre-disturbance stream grade, it may be necessary to lay the banks back by digging into non-fill material. The excavator would make final adjustments to the excavated stream crossing. The final surface would be smoothed by back dragging with the dozer or the back of the excavator bucket.

- Trees and brush removed prior to excavation would then be spread over the surface of the side slopes as mulch. Mulch would be preferentially applied to stream crossing sites to reduce the delivery of sediment from surface erosion on crossing sideslopes. Within 50 feet of the stream channel crossing excavation sideslopes would be mulched to provide 70% to 90% surface coverage. Between 50 feet and 100 feet mulch would be applied to sideslopes to provide 50% to 70% surface coverage. Road approaches with less than a 50-foot natural buffer to stream channels would be treated with mulch applied to provide 50% to 70% surface coverage. Where the quantity of mulch material is insufficient to meet these requirements, locally derived material would be imported to the crossing sites from nearby interfluvial road sections. Mulch applied at crossings would be pressed onto the ground surface wherever possible using either the excavator or the dozer.
- Cutbanks exposing seeps or springs would not be recontoured. Instead, the crossing fill would be exported to a dry section of the road away from stream crossings. An outsloped cutbench would be left adjacent to the stream crossing, if wet areas are present.
- Road sections immediately adjacent to stream crossings would not be fully recontoured. Instead, the embankment fill would be removed and the exposed cutbank would only be partially recontoured. The partial filling against the cutbank would slowly be tapered to full recontour as the equipment moves away from the channel. This would reduce the slope on each side of the crossing, lessening the chance for direct sediment delivery if a post-treatment slope failure occurs.

## **2.7 Visitation to the Mill Creek Acquisition**

The Mill Creek Acquisition is not open to the public at this time due to safety concerns with the road system and abandoned industrial buildings, a lack of facilities to accommodate visitors, and no available ranger or visitor services staff. The long-term goals for the property include obtaining funding to develop facilities, improving access, and providing staffing to allow public access. Visitation is allowed by appointment only for scientific, research, or CEQA review purposes.

## **2.8 Consistency with Local Plans and Policies**

The proposed Bummer Switchback Road Removal Project at the Mill Creek Acquisition is consistent with local plans and policies. The implementation of this project is consistent with other projects conducted or planned by the County of Del Norte, Six Rivers National Forest, and Redwood National Park Service (NPS).

## **2.9 Discretionary Approvals**

DPR has approval authority for the proposed Bummer Switchback Road Removal Project at the Mill Creek Acquisition. The project would require discretionary approval from the California Department of Fish and Game (DFG) in the form of a Stream Alteration Agreement (SAA). The SAA would be applied for after the Notice of Determination (NOD) has been filed for this project. An Army Corps of Engineers Section 404 Permit will be obtained by DFG for this project, and NOAA Fisheries will be consulted as part of the Section 404 permitting process. The U.S. Fish and Wildlife

Service (USFWS) has reviewed the project site with regard to the marbled murrelet and Northern Spotted Owl. Prior to operations, a letter of Technical Assistance would be obtained from the USFWS, identifying any temporal operating restrictions for the species.

## **2.10 Related Projects**

This project is the first road removal project within the Mill Creek acquisition. Nearby, the Last Chance Road Removal project was conducted in Del Norte Coast Redwoods State Park in 1997. In addition, Redwood National Park conducts an ongoing road removal program in Redwood Creek. North Coast Redwoods District is planning numerous similar road removal projects in other areas of the park.

Johnson (1995) has shown that the cumulative effect of treating numerous sites in a watershed reduces chronic high levels of sediment delivered to streams from failing roads and road related structures, and reduces peak flows in sensitive coastal streams. Treatment of proposed sites in the MCA should substantially aid watershed recovery and reduce cumulative negative effects induced by dense backcountry road networks that persist in our disturbed parklands. In an analysis of similar projects in Redwood National and State Parks, Madej (2000) found that the short-term erosion and sedimentation that occurs at stream crossings throughout the project areas will deliver less total material than would be deposited over time, if the projects were not implemented.

Many of the crossings within the proposed project area are large and steeply perched in the tributaries to Rock Creek and the East Fork of Mill Creek. In addition, failing crossings higher in the watershed are contributing sediment to the streams and increasing the likelihood of plugged culverts at the lower crossings. This project will address crossings throughout the watershed in various stages of failure and prevent further degradation of stream conditions downstream.

### Chapter 3 Environmental Checklist

PROJECT INFORMATION	
1. Project Title:	Bummer Switchback Road Removal Project
2. Lead Agency Name & Address:	California Department of Parks and Recreation 1416 Ninth Street P.O. Box 942896 Sacramento, CA 94296-0001
3. Contact Person & Phone Number:	Brian R. Merrill - phone (707) 445-5344; <span style="float: right;">(message) 445-6547; (fax) 441-5737</span>
4. Project Location:	Mill Creek Acquisition - Del Norte County
5. Project Sponsor Name & Address:	California Department of Parks & Recreation North Coast Redwoods District 3431 Fort Avenue Eureka, California 95503
6. General Plan Designation:	No General Plan - New Acquisition
7. Zoning:	Recreation
8. Description of Project:	<p>DPR proposes to make the improvements described herein to the Mill Creek Acquisition (MCA) watersheds. The following is a summary of the planned improvements:</p> <ul style="list-style-type: none"> <li>• <b>Full Road Recontouring</b> Full or partial road recontouring of approximately 17.5 miles of abandoned, unstable inner-gorge, mid-slope and ridgetop service and skid roads within the Mill Creek Watersheds. The work would include excavation of embankment fill from roads and stabilization of excavated materials on the cutbench to fully or partially recontour natural (pre-disturbance) topography.</li> <li>• <b>Stream Crossing Removal</b> Removal of fill material from 109 stream crossings associated with the service and skid roads indicated above. The majority of the crossings would have no flow during the proposed construction season and are typically small fill crossings. Stream crossing removal would include removal of road and landing fill from stream channels and floodplains. Placing excavated material against nearby road cut slopes and recontouring to match the natural slopes would reduce road crossing failures. Stream channel bed, banks, and adjacent slopes would be restored to their pre-crossing configuration. Longitudinal stream gradient would be reestablished through the crossing site.</li> </ul>
9. Surrounding Land Uses & Setting:	Refer to Chapter 3 of this document (Section IX, Land Use Planning)
10. Approval Required from Other Public Agencies:	California Department of Fish and Game; US Fish and Wildlife Service; North Coast Regional Water Quality Control Board

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

If implemented as written, this project could result in a "Potentially Significant Impact" involving at least one area of the environmental factors checked below, as indicated in the Initial Study on the following pages.

Aesthetics	Agricultural Resources	Air Quality
Biological Resources	Cultural Resources	Geology/Soils
Hazards & Hazardous	Hydrology/Water Quality	Land Use/Planning
Materials		
Mineral Resources	Noise	Population/Housing
Public Services	Recreation	Transportation/Traffic
Utilities/Service Systems	Mandatory Findings of Significance	None

**DETERMINATION**

On the basis of this initial evaluation:

I find that the proposed project **could not** have a significant effect on the environment and a **negative declaration** will be prepared.

I find that, although the original scope of the proposed project **could** have had a significant effect on the environment, there **will not** be a significant effect because revisions/mitigations to the project have been made by or agreed to by the applicant. A **mitigated negative declaration** will be prepared.

I find that the proposed project **may** have a significant effect on the environment and an **environmental impact report** or its functional equivalent will be prepared.

I find that the proposed project **may** have a "potentially significant impact" or "potentially significant unless mitigated impact" on the environment. However, at least one impact has been adequately analyzed in an earlier document, pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis, as described in the report's attachments. An **environmental impact report** is required, but it must analyze only the impacts not sufficiently addressed in previous documents.

I find that, although the proposed project could have had a significant effect on the environment, all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration, pursuant to applicable standards, and have been avoided or mitigated, pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project. Therefore, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required.

*(Signature on file)*

Kathy Amann, Service Center Manager, for  
John Kolb, District Superintendent  
North Coast Redwoods District - California State Parks

April 15, 2004

Date

**Evaluation of Environmental Impacts**

1. A brief explanation is required for all answers, except "No Impact", that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact does not apply to the project being evaluated (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on general or project-specific factors (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must consider the whole of the project-related effects, both direct and indirect, including off-site, cumulative, construction, and operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether that impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate when there is sufficient evidence that a substantial or potentially substantial adverse change may occur in any of the physical conditions within the area affected by the project that cannot be mitigated below a level of significance. If there are one or more "Potentially Significant Impact" entries, an Environmental Impact Report (EIR) is required.
4. A "Mitigated Negative Declaration" (Negative Declaration: Less Than Significant with Mitigation Incorporated) applies where the incorporation of mitigation measures, prior to declaration of project approval, has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact with Mitigation." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR (including a General Plan) or Negative Declaration [CCR, Guidelines for the Implementation of CEQA, § 15063(c)(3)(D)]. References to an earlier analysis should:
  - a) Identify the earlier analysis and state where it is available for review.
  - b) Indicate which effects from the environmental checklist were adequately analyzed in the earlier document, pursuant to applicable legal standards, and whether these effects were adequately addressed by mitigation measures included in that analysis.
  - c) Describe the mitigation measures in this document that were incorporated or refined from the earlier document and indicate to what extent they address site-specific conditions for this project.
6. Lead agencies are encouraged to incorporate references to information sources for potential impacts into the checklist or appendix (e.g., general plans, zoning ordinances, biological assessments). Reference to a previously prepared or outside document should include an indication of the page or pages where the statement is substantiated.
7. A source list should be appended to this document. Sources used or individuals contacted should be listed in the source list and cited in the discussion.
8. Explanation(s) of each issue should identify:
  - a) the criteria or threshold, if any, used to evaluate the significance of the impact addressed by each question **and**
  - b) the mitigation measures, if any, prescribed to reduce the impact below the level of significance.

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## ENVIRONMENTAL ANALYSIS

The Environmental Analysis (Initial) Checklist was prepared to assess the proposed project's impact on the environment. The environmental setting for each topic describes the conditions currently existing at the project site. Potential environmental impacts, identified by checklist point, are addressed in the discussion section. For each impact identified as "less than significant with mitigation", mitigation measures have been specified to reduce the impact to a less than significant level.

## ENVIRONMENTAL ISSUES

### I. AESTHETICS.

#### Environmental Setting

The Mill Creek Acquisition lies within the coastal mountains of northwestern Del Norte County. The area has served as a commercial timber property for more than a century. The property is covered with even-aged conifer forest and has a dense network of timber hauling roads. Numerous recent clearcuts are still visible within and surrounding the project area. Road scars are ubiquitous and dissect all the subwatersheds within the acquisition. Numerous road-related landslides are visible within the project area surrounding subwatersheds.

The treatment area within the MCA is located in the northeast corner of the property. The northern extent of the treatment area lies along the northern property boundary. The southern extent is framed by Childs Hill Road. The eastern extent of the project area is defined by Rock Creek and the western edge is defined by Childs Hill Road. The project area is approximately ten miles southeast of Crescent City.

Past road removal projects in Del Norte Coast Redwoods State Park have greatly improved aesthetic values in the park. Decompaction of old road surfaces and full recontouring of approximately 1.5 miles of roads in 1997 eliminated road scars and improved soil conditions for natural revegetation. Removal of the old road scars added to the aesthetic values of the Last Chance Creek area and natural vegetation has already completely hidden the former road corridor and the rehabilitation work.

The ruins of old buildings and large machinery located in the acquisition are also considered aesthetic resources. The structures at the nearby abandoned mill site appear rustic, are generally in good condition, and may provide a focus to the historical uses of the area. There is no visitor access to the MCA at this time.

Would the project:

<u>POTENTIALLY</u> <u>SIGNIFICANT</u> <u>IMPACT</u>	<u>LESS THAN</u> <u>SIGNIFICANT</u> <u>WITH</u> <u>MITIGATION</u>	<u>LESS THAN</u> <u>SIGNIFICANT</u> <u>IMPACT</u>	<u>NO</u> <u>IMPACT</u>
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- a) Have a substantial adverse effect on a scenic vista?

- |  | <u>POTENTIALLY<br/>SIGNIFICANT<br/>IMPACT</u> | <u>LESS THAN<br/>SIGNIFICANT<br/>WITH<br/>MITIGATION</u> | <u>LESS THAN<br/>SIGNIFICANT<br/>IMPACT</u> | <u>NO<br/>IMPACT</u> |
|--|---|--|---|----------------------|
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? |   |  |   |                      |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings?  |   |  |   |                      |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?                                    |   |  |   |                      |

### Discussion

- a. The project sites are not visible from any vista point or scenic highway. The sites are located in remote backcountry portions of the acquisition, which is not open to the public. The road removal sites will not be visible from any public use areas. No impact.
- b. None of the proposed project sites are within a state scenic highway easement or viewshed. The construction sites are confined to areas previously disturbed by clear-cut logging practices. The work would help improve the scenic resource of second growth forest. The work would improve the backcountry characteristics by removing road scars and related features, thereby improving the park experience if public access is developed in the future. Old-growth trees would be protected from damage by equipment. No rock outcrops would be damaged by excavation. Finally, no historic resources of esthetic value are in the project area. No impact.
- c. The MCA is not open to the public at this time due to problems with the road system and because park staffing capability is insufficient in the area to provide for visitor safety. Therefore, the general public would not view temporary visual effects as the work is progressing. As park facilities are added and the MCA is opened to the public, visitors would be able to view the work locations, however, the final site conditions would closely match the previous undisturbed landform and would be much less obtrusive than the project during construction. Less than significant impact
- d. Lighting is not an element of this project and no new light sources would be introduced into the landscape. It is expected that all construction work for the proposed project would be limited to daylight hours, eliminating the need for work lights. However, unavoidable delays or emergency situations could require minimal use of exterior construction lights on a limited basis. However, the project would not create glare because all larger trees, which moderate light intensities and provide shade to the site, would be preserved along the road removal locations. Less than significant impact.

## II. AGRICULTURAL RESOURCES

### Environmental Setting

The MCA is now part of the California State Park System. Commercial timber operations have stopped as part of the transition of the property from private timber holdings to public parkland. The adjoining land to the east and south of the park is commercial timberland and National Forest. Land to the north and west of the MCA is zoned for recreation.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?				
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?				

\* In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model for use in assessing impacts on agricultural and farmland.

### Discussion

- a) No land adjoining the project site in any direction is zoned as agricultural land or used for agricultural purposes, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California. Therefore, this project would have no effect on any category of California Farmland, conflict with any existing zoning for agricultural use or Williamson Act contract, or result in the conversion of Farmland to non-agricultural use. No impact.
- b) As noted in the Environmental Setting above, the MCA is part of the California State Park System and does not support any agricultural operations or farmland. No impact.
- c) Departmental policies and practices, deed restrictions, and other constraints related to acquisition of designated agricultural lands and the impacts of continued agricultural use on the park's operational and resource management needs, do not allow for agricultural uses in the MCA. No impact to agricultural resources.

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### III. AIR QUALITY

#### Environmental Setting

The MCA project sites are in Del Norte County, which is part of the North Coast Air Basin (Basin), under the jurisdiction of the North Coast Unified Air Quality Management District (NCUAQMD or District) and the United States Environmental Protection Agency (USEPA) Region IX. NCUAQMD is the regional agency that regulates sources of air pollution within Del Norte County. The District's boundaries include Humboldt, Trinity, and Del Norte Counties. The NCUAQMD's main purpose is to enforce local, state, and federal air quality laws and regulations.

Del Norte County has relatively clean air due to frequent rains, ocean winds, low levels of commuter traffic, and a small industrial base. Because of these conditions, Del Norte County is currently in attainment with all California standards including: carbon monoxide, hydrogen sulfide, lead, ozone, nitrogen dioxide, sulfur dioxide, and sulfides. An area is designated in attainment if the state standard for the specified pollutant was not violated at any site during a three-year period.

The district is in non-attainment with California standards for particulate matter (PM 10, or particles with an aerodynamic diameter of 10 microns or less). The major sources of PM 10 are combustion (e.g., woodsmoke; emissions from industry, automobiles, and diesel engines; and dust (e.g., airborne soil, road dust caused by vehicle travel). An area is designated in non-attainment if there was at least one violation of a state standard for the specified pollutant within the area boundaries.

With respect to Federal standards, the North Coast Air Basin is in attainment of all Federal standards and is undetermined for PM 2.5 pollutants.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Conflict with or obstruct implementation of the applicable air quality plan or regulation?				
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				
d) Expose sensitive receptors to substantial pollutant concentrations (e.g., children, the elderly, individuals with compromised respiratory or				

immune systems)?

<u>POTENTIALLY</u> <u>SIGNIFICANT</u> <u>IMPACT</u>	<u>LESS THAN</u> <u>SIGNIFICANT</u> <u>WITH</u> <u>MITIGATION</u>	<u>LESS THAN</u> <u>SIGNIFICANT</u> <u>IMPACT</u>	<u>NO</u> <u>IMPACT</u>
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- e) Create objectionable odors affecting a substantial number of people?

\* Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations.

### Discussion

- a) Work proposed in this project is not in conflict with or would not obstruct implementation of any applicable air quality plan for Del Norte County, the North Coast Air Basin, NCUAQMD, or USEPA Region IX. The organic material generated during this project would not be burned. No diesel portable equipment would be used during the project. No impact.
- b,c) The proposed project would not emit air contaminants at a level that, by themselves, would violate any air quality standard, or contribute to a permanent or long-term increase in any air contaminant. However, project construction would generate short-term emissions of fugitive dust (PM10) and involve the use of equipment and materials that would emit ozone precursors (i.e., reactive organic gases [ROG] and nitrogen oxides, or NOx). Increased emissions of PM10, ROG, and NOx could contribute to existing non-attainment of PM10 conditions and interfere with achieving the projected attainment standards. Consequently, construction emissions would be considered a potentially significant short-term adverse impact. Implementation of the following mitigation measures would reduce potential impacts to a less than significant level.

#### Mitigation Measures AIR-1

- All equipment engines would be maintained in good condition, in proper tune (according to manufacturer's specifications), and in compliance with all State and federal requirements.
- Traffic speed on unpaved roads would be limited to 15 miles per hour (mph).
- Excavation and grading activities would be suspended when sustained winds exceed 25 mph, instantaneous gusts exceed 35 mph, or when dust from construction might obscure driver visibility on public roads.
- No more than eight pieces of heavy equipment would operate at the sites at the same time. No more than ten service vehicles would enter the project site at one time.

- d) The project will not expose sensitive receptors to substantial pollutant concentrations. The MCA is not open to the public. There are no developments or public use facilities within one mile of the project area. No Impact.
- e) The proposed work would not result in the generation of objectionable odors that would affect a substantial number of people. The MCA is not open to the public. There are no developments

or public use facilities within one mile of the project area. No Impact.

#### IV. BIOLOGICAL RESOURCES

##### Environmental Setting

##### PLANTS

At least 15 vegetation series are present on the Mill Creek property according to the Mill Creek Property Interim Management Recommendations prepared by Stillwater Associates (2002), which is the source of information for this section. Vascular plant species diversity is high with possibly over 300 species present. The following tree-dominated vegetation series are found on the property (listed in the order of their abundance): Redwood, Red Alder, Western White Pine, Knobcone Pine, Sitka Spruce, and Jeffrey Pine. Herbaceous-plant dominated series on the property include Bulrush, Bulrush-Cattail, California Annual Grassland, Introduced Perennial Grass, and Pampas grass. Shrub-dominated series include the Blue Blossum and Huckleberry Oak series. Other series present include the Darlingtonia and Fen series.

The coastal fog belt provides good growing conditions for fast-growing conifers such as coast redwood (*Sequoia sempervirens*). Douglas-fir (*Pseudotsuga menziesii*) is found in association with redwoods, particularly in the eastern portion of the property, where coastal influence is diminished. Sitka spruce (*Picea sitchensis*), grand fir (*Abies grandis*), western hemlock (*Tsuga heterophylla*), western red cedar (*Thuja plicata*), Port Orford cedar (*Chamaecyparis lawsoniana*), red alder (*Alnus rubra*), and tanoak (*Lithocarpus densiflorus*) are found as minor components of the coastal forest on the property. Past management of the property has resulted in primarily even-aged, monospecific forest stands of various ages.

The composition of riparian stands along fish-bearing streams on the property differs depending on whether the stands border high-gradient, confined channels or lower-gradient, less-confined channels. Riparian communities along high-gradient, confined channels are currently dominated by sapling or multi-layered stands <50 years old. Most stands along these channels consist of pole-size, second-growth trees, with trees >61 cm (24 in) dbh accounting for less than 25% of the canopy cover.

Hardwoods, particularly red alder and maple, are an important component of riparian stands along the lower-gradient, less-confined channels found on the property. Forty-nine percent of the riparian area along low gradient channels consists of hardwoods, with most of these stands being pole-size trees >50 years of age with a few scattered large-diameter old-growth redwoods in the overstory. Hardwoods generally dominate riparian areas along large, unconfined channels because these trees quickly colonize gravel bars that become stable following large floods or channel avulsions. Redwood and Douglas fir trees <28 cm (11 in) dbh and <30 years of age dominate the riparian stands along the remaining streams.

Several rare and endangered plant species are present or can be potentially found on the Mill Creek property. The two special plant species that have the potential to exist are McDonald's rock cress (*Arabis macdonaldiana*) and Western lily (*Lilium occidentale*). McDonald's rock

gress is listed as rare in California and federally endangered, and Western lily is listed as endangered in California and federally endangered. Other species potentially present include 15 Category 1B species (plants that are rare,

threatened, or endangered in California and elsewhere), 18 Category 2 species (plants that are rare, threatened, or endangered in California, but more common elsewhere), and 19 Category 4 species (plants of limited distribution; a watch list).

Tree species of particular interest found within the Mill Creek property include knobcone pine (*Pinus attenuata*), Port Orford cedar (*Chamaecyparis lawsoniana*), western white pine (*Pinus monticola*), and Jeffrey pine (*Pinus jeffreyi*). Knobcone pine is a serotinous (fire-adapted) species that can be a climax species on poor soils or an early successional species in redwood and Douglas fir. Knobcone pine is abundant in old harvest areas of various ages, due to the extensive timber management and broadcast burning. Recently harvested and burned plantations on the property are characterized by an abundance of regenerating knobcone pines. Such reproduction is unusual within the species' range due to past fire suppression and absence of timber management in knobcone pine stands in general.

The second tree species of special interest is the Port Orford cedar (POC), which occurs throughout the property. POC generally occupies coastal ranges in a 40-km (25-mi) wide zone extending from Reedsport, Oregon south to central Humboldt County. POC is generally uncommon across its range, although it is locally abundant in some areas of the property. This species is suffering substantial mortality due to an exotic, fatal root disease called Port Orford Cedar root disease (*Phytophthora lateralis*) that is spreading readily throughout its range. Although the disease is common in the nearby South Fork of the Smith River drainage and the Smith River National Recreation Area, until recently there had been no indication that the disease was present within the Mill Creek property. In fact, the Mill Creek watershed had been reported to be one of the few unaffected watersheds in Del Norte County. Lack of the disease was probably due to the absence of through traffic and the relatively isolated watersheds. In addition, Stimson did not use heavy equipment brought from off-site, which decreased the potential for the disease to be introduced from other areas. Recently, the root disease was confirmed by U.S. Forest Service plant pathologists at two locations in upper Bummer Lake Creek and one on Rock Creek on the property.

A third tree of interest is the Jeffrey pine, which occurs on serpentine and periodite soils and under environmentally harsh conditions. This pine has a deep root system and is found at elevations between 1,000 and 3,100 m (3,281 and 10,171 ft). The rare Koehler's stipitate rock cress (*Arabis koehleri* var. *stipitata*) and the federally endangered McDonald's rock cress (*Arabis macdonaldiana*) may occur in association with this species. Within the Mill Creek property, the Jeffrey pine series is only found in a small area in the northeast corner of the property. It is unlikely that these species would be found at the project site.

At least two *Darlingtonia* fens occur east of Childs Hill on ultramafic soils. One fen is approximately 12 by 24 m (40 ft by 80 ft) and dominated by California pitcherplant (*Darlingtonia californica*), Labrador-tea (*Ledum glandulosum*), Sitka alder (*Alnus viridus* var. *sinuata*), salal (*Gaultheria shallon*), slough sedge (*Carex obnupta*), and western azalea (*Rhododendron occidentale*). In addition, a small population of the relatively rare Vollmer's lily (*Lilium pardalinum* spp. *vollmeri*) is located on the site. *Darlingtonia* fens are often associated with other sensitive

plant species. A second fen was documented by Stimson personnel on the lower slope of Rattlesnake Mountain. More fens may be present on the east slope of Childs Hill, in the northeast portion of the property and on the west slope of Rattlesnake Mountain. No *Darlingtonia* fens occur on the project site.

The Fen series is similar to the *Darlingtonia* Fen series, except that *Darlingtonia californica* and a few other species are absent. Fen series occur in a few areas on the property. One site is approximately 12 m by 70 m (40 ft by 70 ft) and dominated by Nootka reedgrass (*Calamagrostis nutkaensis*), Sitka alder, deer fern (*Blechnum spicant*), Labrador tea, salal, bog St. John's wort (*Hypericum anagalloides*), and peat moss (*Sphagnum spp.*). Similar fens are exceedingly rare in northern California, making this fen significant, especially due to its similarity to a fen located in the Crescent City Marsh Wildlife Area, approximately 1.5 miles to the north, which supports the largest known population of the federally endangered western lily (*Lilium occidentale*). Thus, the fen series on the Mill Creek property provides a transitional stage between the coastal habitat of the western lily, and the more inland *Darlingtonia* fens. Additional representatives or species at the southern limits to their distributions such as sweet grass (*Hierochloa odorata*) and great burnet (*Sanguisorba officinalis*) could be present in the east half of the Mill Creek property. It is unlikely that plant species of the Fen series would be found at the project site.

## ANIMALS

Based on the number of plant communities and variety of habitat types found on the property, it is likely that wildlife diversity is relatively high. Although reptile diversity is low, shaded seeps and streams and old-growth forest habitats on the property likely provide habitat for a variety of amphibians, including five species listed by DFG as Species of Special Concern (SCS): southern torrent salamanders (*Rhyacotriton variegatus*); tailed frogs (*Ascaphus truei*); Del Norte salamanders (*Plethodon elongatus*); northern red-legged frogs (*Rana aurora aurora*) and foothill yellow-legged frogs (*Rana boylei*). Small mammals adapted to forest habitats in this area include deer mice (*Peromyscus maniculatus*), dusky-footed woodrats (*Neotoma fuscipes*), northern flying squirrels (*Glaucomys sabrinus*), California red tree voles (*Arborimus longicaudus*) (SCS), and red-backed voles (*Clethrionomys californicus*). Several bat species may also occur on the property. Larger mammals known to occur in Del Norte County include gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), black bear (*Ursus americanus*), river otter (*Lutra canadensis*), bobcat (*Felis rufus*), mountain lion (*Felis concolor*), black-tailed deer (*Odocoileus hemionus*), and Roosevelt elk (*Cervus elaphus roosevelti*). Humboldt marten (*Martes Americana humboldtensis*) are believed to be extremely rare or extinct. The five amphibian species of special concern may be present in the project site.

Bird species on the property include neotropical migrants, such as purple martin (*Progne subis*), yellow warbler (*Dendroica petechia*), and Vaux's swift (*Chaetura vauxi*), and old-growth-associated species such as northern spotted owls (*Strix occidentalis caurina*). Two Federally listed threatened species are known to occur in the Mill Creek area, the bald eagle, and northern spotted owl. Bald eagles are also listed as endangered under the California Endangered Species Act. Because of habitat modification by past logging practices, it is unlikely that these species would be present on the project site.

Streams within the Mill Creek property support both anadromous and resident fish populations. The Southern Oregon/Northern California Coast (SONCC) coho salmon (*Oncorhynchus kisutch*) are federally listed as threatened and are currently the only listed fish species found in the Mill Creek watershed. Other anadromous salmonids known to occur in Mill Creek include fall chinook salmon (*Oncorhynchus tshawytscha*), chum salmon (*Oncorhynchus keta*), steelhead (*Oncorhynchus mykiss*), and coastal cutthroat trout (*Oncorhynchus clarkii*). Other fish species that have been reported from streams on the Mill Creek property include western brook lamprey (*Lampetra richardsoni*), river lamprey (*Lampetra ayresi*), Pacific lamprey (*Lampetra tridentate*), prickly sculpin (*Cottus asper*), riffle sculpin (*Cottus gulosus*), threespine stickleback (*Gasterosteus aculeatus*), Klamath smallscale sucker (*Catostomus rimiculus*), and American shad (*Alosa sapidissima*). Introduced fish species may be present such as black bass (*Micropterus spp.*), sunfish (*Lepomis spp.*), and catfish (*Ictaluridae*) that were previously introduced into the 4.6-acre-foot reservoir located to the north west of the Forestry Center.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a sensitive, candidate, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, the U.S. Fish and Wildlife Service, or NOAA Fisheries?				
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?				
c) Have a substantial adverse effect on federally protected wetlands, as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state				

habitat conservation plan?

**Discussion**

- a) DFG has been consulted on similar projects in the past and recommendations implemented in those projects to avoid and/or minimize impacts to rare, threatened or endangered species are reflected in the scope of this project. USFWS was also consulted

as part of a Technical Assistance request to discuss rare, endangered, or threatened species. Based on the Technical Assistance it was determined that spotted owl habitat does not exist in the project area or the surrounding area due to intensive logging during the past two decades. However, in order to monitor the surrounding area it was recommended that protocol owl surveys be conducted at four sites where recent owl detections have occurred elsewhere in the park. No operations associated with this project would occur until a valid letter of Technical Assistance reflecting the current survey data has been obtained and the recommendations amended into the Final MND, if necessary.

A primary goal of road rehabilitation is the improvement of habitat for, and protection of, rare, threatened, and endangered species. The project would be conducted in compliance with all applicable State and federal threatened and endangered species protection laws and regulations.

#### Plants

As indicated in the Environmental Setting above, no state or federally endangered or threatened plants are known to occur within the project area; however, several sensitive plant species exist in the park. Activities conducted as part of this project such as brush clearing and excavation of the road prism have the potential to cause a significant impact to one or more of these sensitive species. Implementation of the mitigation measures listed below would reduce any potential impact to a less than significant level.

#### **Mitigation Measures BIO-1 (plants)**

- Plant surveys will be conducted throughout the MCA on all road removal and stream crossing construction sites and special status plant occurrences will be mapped and flagged.
- Surveys would be conducted by a qualified botanist and would take place during the flowering season to ensure the proper identification of species.
- If rare plants are found within the construction footprint, they would be avoided to the maximum extent practicable. If avoidance is not possible the Department of Fish and Game will be consulted to determine how to proceed.
- Final reports are required on all biological surveys conducted by consultants or contractors. All surveys shall include accurately mapped populations and be referenced to clearly flagged locations in the field.

#### Fish

The majority of the stream crossings are located on ephemeral (class 3) or seasonal (class 2) watercourses that do not offer fish habitat and would be dry during excavation. However, there is the potential for a significant impact to downstream fish populations or their habitat due to siltation and/or turbidity in areas with running water during construction, specifically where known or potential fish habitat would be downstream from crossing removal sites. Implementation of the following mitigation measures would reduce any potential impact to a less than significant level.

**Mitigation Measures Bio-2 (Fish)**

- Stream crossing excavations would take place in dry channels or in channels where stream flow is diverted around the excavation sites. Excavations have been designed to limit negative effects on water quality to the maximum extent practicable.
- In some crossings, where the stream is flowing at a slow rate and cannot be captured and diverted, filter structures would be installed downstream to filter turbid discharge from the worksite. In other crossings, where flow is sufficient to be intercepted, a small diversion dam would be built upstream and stream flow piped around the worksite and discharged into the stream below the work-site.
- It is anticipated that most of the work will occur outside of the rainy season (June 1st to October 15<sup>th</sup>). On roads where potential sediment delivery to streams exists, construction activities after October 15th would proceed using conditions established by the National Marine Fisheries Service (NOAA Fisheries) during consultation for the Army Corps of Engineers permit obtained by DFG for this project. This work will also be conducted in a manner consistent with conditions applied by NOAA Fisheries to similar projects located on nearby federal lands.
- If periods of dry weather are predicted after October 15<sup>th</sup>, small additional work items may be done with DFG approval, if they can be completed within the window of dry weather. DPR will have materials to sufficiently mulch bare work areas on-site at all times. Work would be conducted with weekly consultation with DFG regarding weather forecasts and streamflow conditions. Work would be conducted so that no more than one-half day would be required to finish all earth moving and mulching work. All access roads would be winterized prior to any additional earth moving tasks.
- Streams and riparian zones will not be used as equipment staging or refueling areas. Equipment will be stored, serviced and fueled away from riparian areas. Heavy equipment will be cleaned (e.g., power washed, steam) prior to use below the ordinary high water mark.
- Any disturbed soil adjacent to stream channels would receive evenly distributed mulch coverage with masticated brush and trees to reduce sheet erosion. Coverage would be 70% to 90% adjacent to the stream or where no native mulch buffer exists between disturbed soil and a stream channel. Mulch will consist exclusively of native slash generated during the clearing phase of the rehabilitation work.
- DPR will ensure that routine road maintenance is performed on or before October 15th on all non-decommissioned road segments used to access the project sites, unless DFG approves limited project work beyond October 15th.
- DPR will ensure that contract(s) associated with the project contain all of the relevant BMPs, and other descriptions of sideboards and measures identified in this MND and in other documents associated with consultations for this project as necessary to avoid or minimize incidental take of SONCC coho salmon. If DPR determines that the contractor is not in compliance with the project contract, and non-compliance could result in greater effects than previously anticipated to SONCC coho salmon, DPR will contact DFG to discuss the need for additional measures to minimize impact.

### Birds

The USFWS and DFG are providing technical assistance during the planning and implementation phases of watershed restoration work occurring throughout the area and have attended a field visit to the sites included in this project. A letter of Technical Assistance will be on file at the Arcata office of the US Fish and Wildlife Service and appended to the MND prior to the start of any construction.

Potential habitat for the State and Federally listed marbled murrelet does not exist in the project locations. The earth-moving sites are generally within an area that was clear-cut logged prior to DPR ownership.

According to the USFWS biologist who reviewed the site, there is no potential nesting habitat for the northern spotted owl (NSO) in the project area. Although a small amount of foraging habitat will be removed from some of the crossings in the Bummer Lake Spurs area, these are either too far from an NSO activity center to have an adverse effect, or there is sufficient foraging habitat within a 1.3 mile radius of an activity center to meet threshold requirements.

The site is potential habitat for a variety of raptors, however the potential for occupancy is relatively low. The following mitigation measures would be implemented to reduce any potential impacts to a less than significant level.

#### **Mitigation Measures Bio-3 (Birds)**

- Prior to operations the DPR inspector would be instructed in the identification of raptor nests (both occupied and unoccupied) and raptor breeding behavior. During operations the inspector would be responsible for assuring that no raptor nests are impacted by the proposed treatments.
- If an unoccupied raptor nest is detected then the nest tree would not be disturbed and the location reported to the Sector Resource Ecologist.
- If an occupied raptor nest is detected in the project area, then the DPR inspector would cease operations within ¼ mile of the raptor nest and immediately notify the Sector Resource Ecologist. The Sector Ecologist will consult with DFG on site specific and species-specific mitigation measures. Any such changes would be amended into the MND, if necessary. Nests that are outside of the project area but that occur within a ¼ mile will be protected with a no-noise disturbance zone that excludes operations within it from February 01 through August 31.

### Amphibians

Park staff, trained in species and habitat identification, conducted a watershed inventory and mapped potential amphibian habitat within the project area, which includes springs, seeps, and watercourses. During construction, disturbed areas are monitored for the presence of terrestrial salamanders and any that are found are relocated into adjacent undisturbed areas. At stream crossings where stream diversion is necessary, dewatered areas will be visually inspected for presence of amphibians, and any present will be captured and released.

upstream. Although compacted road fill generally does not provide

suitable habitat for amphibians, some loss may occur at stream crossing removal sites if they are within the road prism subsurface, but not sufficiently deep in the crossings to avoid being excavated. The potential magnitude of the loss is deemed so small by DPR ecologists as to be insignificant. Furthermore, once road and crossing fill is removed and sediment loads are reduced, habitat quantity and quality in both the crossing vicinity and overall watershed would be greatly increased (Ashton, 2002). Qualitative surveys of stream crossing removal sites following completion of past watershed rehabilitation projects indicate that the sites are readily re-occupied by (list amphibians observed)(observer, year observed).

#### Trees

Some of the trees growing in road crossing or adjacent road embankment fill, regardless of diameter breast height (DBH), would be removed as part of the road rehabilitation process. Trees greater than 24 inches DBH, buried by fill that predates crossing or road construction, would be retained to the maximum extent possible. The lower limbs of these trees may be removed if required for access. Small trees that are buried in fill that predates road construction would be left whenever practical. Tree roots would be avoided, as the excavations would not be deeper than the original ground surface. Some adventitious roots that have grown into embankment fill may be damaged. Therefore, the following mitigations would be implemented to reduce the potential impact to any mature or specimen trees from this proposed project to a less than significant level.

<b>Mitigation Measures BIO-4 (trees)</b>
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| <ul style="list-style-type: none"> <li>• Trees to be retained will be identified (marked, flagged, or otherwise indicated) prior to the start of work and avoided during construction activities.</li> </ul> |
|--|

- b) Some work would occur in riparian corridors at stream crossings. However, equipment would be working within existing road alignments at the crossings and would only affect previously impacted areas. Equipment would remain on existing road alignments and crossing fill areas to the maximum extent practicable. This project would have a less than significant impact to any riparian habitat or other sensitive natural community.
- c) Technical assistance was requested in past projects similar in scope and design to this project from the U.S. Army Corps of Engineers (USACE or Corps). The Corps determined that "...a Department of the Army authorization will not be required since the activity will not involve the discharge of dredged or fill material into a water of the United States, including wetlands, pursuant to Section 404 of the Clean Water Act." No fill would be placed on springs, seeps, or wetlands. Therefore, this project would have no impact on any federally protected wetlands.
- d) This project would have less than significant impact on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. The relatively small area under construction at one time would only limit migration for a few days, at most, in any location. Stream crossing removal would generally take place in streams that are dry or have flow below that required for fish migration. The project would not impede the use of native wildlife nursery sites.

- e) No local policies protecting biological resources currently exist. No impact.
- f) The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan because none exist for any project location. No impact.

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## V. CULTURAL RESOURCES

### Environmental Setting

The Crescent City area was home to the Tolowa Indians who lived in approximately eight villages along the coast, with seven of them containing as many as 300 persons each (Gould 1978). The Tolowa were in regular contact with neighboring tribes such as the Yurok, Karok, Hupa, and Tututni. They participated in ceremonial interactions with these tribes as well as trading, which extended north to the interior of Oregon and along the Pacific coast as far as Puget Sound, Washington. Unlike the tribes to the north and south, the Tolowa settled primarily along the coast and did not frequently use inland areas due to the rugged and heavily forested terrain of the Smith River area. The Tolowa used the Mill Creek area for resource collection, including but not limited to basketry supplies, timber for canoe and shelter construction, and food (Interim Management Recommendations, October 2002).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5?				
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to §15064.5?				
c) Disturb any human remains, including those interred outside of formal cemeteries?				

### Discussion

- a) Areas along the various stream channels included in this project have the potential to contain historic artifacts of previous occupation and use. Implementation of Mitigation Measures CULT-1 below would reduce any potential impact to a less than significant level.

#### Mitigation Measures Cult-1

- A site-specific Cultural Resource investigation will be conducted to locate potentially significant historical resources prior to the start of ground disturbance in any location, in compliance with Public Resources Code (PRC) 5024.5. A report will be prepared by a DPR-qualified Archaeology consultant, under direct oversight by the District State Park Historian.
- No excavation would occur within identified site boundaries. Sites will be avoided to the extent feasible and/or capped, as recommended by the Cultural Resource investigation referenced above. A DPR-qualified cultural resource specialist would monitor the identified sites when equipment travels across the site to access other project areas, or fill is being placed to cap the site. A witness layer of geotextile fabric would be placed on the existing ground surface prior to any fill being placed on an identified site.

**Mitigation Measures Cult-1 (cont.)**

- In the event that previously undocumented cultural resources are encountered during project construction (including but not limited to dark soil containing shellfish, bone, flaked stone, groundstone, or deposits of historic trash), work within the immediate vicinity of the find would be temporarily halted or diverted. Work would not continue at the site until a DPR-qualified cultural resource specialist has evaluated the find and implemented appropriate treatment and disposition of the artifact(s).
- Once any significant cultural resources are found in a project location, a DPR-qualified historian, archaeologist and/or appropriate Native American Tribal representative(s) would monitor any ground-disturbing work in that area from that point forward.

- b) No archeological resources have been identified within the project area. No impact is anticipated, but if any archaeological resources are encountered, implementation of Mitigation Measure CULT-1 above would reduce any potential impact to a less than significant level.
- c) No human remains or burial sites have been documented or are known to exist at the proposed project sites. No impact is anticipated, but if any human remains or burial artifacts are encountered, implementation of Mitigation Measures CULT-2 below would reduce the impact to a less than significant level.

**Mitigation Measures Cult-2**

- In the event that human remains are discovered, work would cease immediately in the area of the find and the project manager/site supervisor would notify the appropriate DPR personnel. Any human remains and/or funerary objects would be left in place or returned to the point of discovery and covered with soil. The DPR Sector Superintendent (or authorized representative) would notify the County Coroner, in accordance with §7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (NAHC) or Native American Tribal representative. If a Native American monitor is on-site at the time of the discovery, the monitor would be responsible for notifying the appropriate Native American authorities.

If the coroner or tribal representative determines the remains represent Native American interment, the NAHC in Sacramento and/or tribe would be consulted to identify the most likely descendants and appropriate disposition of the remains. Work would not resume in the area of the find until proper disposition is complete (PRC §5097.98). No human remains or funerary objects would be cleaned, photographed, analyzed, or removed from the site prior to determination.

If it is determined the find indicates a sacred or religious site, the site would be avoided to the maximum extent practicable. Formal consultation with the State Historic Preservation Office and review by the NAHC/Tribal Cultural representatives would also occur as necessary to define additional site mitigation or future restrictions.

## VI. GEOLOGY AND SOILS

### Environmental Setting

The MCA is located in the Northern California Coast Range and the Western Klamath Mountains Province, expressed as northwest trending mountains and valleys formed by the convergence of the Gorda and North American tectonic plates. The bedrock within the Coast Range consists of Franciscan Broken Formation. These rocks are tectonically fragmented interbedded greywacke, shale and conglomerate (Blake and Jones, 1974). Highly sheared serpentinite and peridotite of the Klamath Mountains Province underlie the northeastern portion of the project area (Madej, 1986). The Coast Range and Klamath mountain provinces are separated by the coast range thrust fault.

Geologic activity, soil types, and high levels of rainfall have created steep and potentially unstable slopes. Land use and the construction of poorly designed roads have destabilized some slopes and are presently contributing to additional instability. Moderate to high seismic activity can be expected in this area, with associated ground shaking, block-falls, and liquefaction of saturated sediments.

The soils of MCA are derived from the Franciscan Formation with some occurrence of Tertiary fluvial deposits along Childs Hill and Little Bald Hills. The Franciscan Formation includes primarily sedimentary rock, along with some igneous and metamorphic rock material. The principal rock material is greywacke, highly variable sandstone with angular medium-sized grains, mixed with shale and siltstone. Igneous and metamorphic rocks are also combined in the substrate in some areas. The shale has a high proportion of angular mineral and rock fragments, with only a small amount of clay materials.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area, or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)				
ii) Strong seismic ground shaking?				
iii) Seismic-related ground failure, including liquefaction?				
iv) Landslides?				
b) Result in substantial soil erosion or the loss of topsoil?				

- |   | <u>POTENTIALLY<br/>SIGNIFICANT<br/>IMPACT</u> | <u>LESS THAN<br/>SIGNIFICANT<br/>WITH<br/>MITIGATION</u> | <u>LESS THAN<br/>SIGNIFICANT<br/>IMPACT</u> | <u>NO<br/>IMPACT</u> |
|---|---|--|---|----------------------|
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable, as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? |   |  |   |                      |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?  |   |  |   |                      |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems, where sewers are not available for the disposal of waste water?   |   |  |   |                      |
| f) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?  |   |  |   |                      |

## Discussion

- a) While the chance of the rupture of a known earthquake fault, strong seismic ground-shaking, seismic-related ground failure, or landslides are certainly possible in this area, this project would not substantially increase the exposure of people or structures to risk of loss, injury, or death as a result of these events. The proposed project would not add any element or structure that would increase public exposure. The MCA lies within a seismically active region and those working on the project would be exposed to any event that might occur. However, exposure for most of the employees would be similar whether working on the project or simply living and working in the surrounding county. In fact, the time-weighted average exposure to seismic hazards is less at the rehabilitation site than it would be in an urban or suburban setting. Due to the remote location of the rehabilitation project, the seismic effects on the project area are unlikely to affect park visitors or staff not directly involved at the site.

Treatments proposed by this project would reduce mass wasting and surface erosion (landslides and mudflows), by eliminating the anthropogenic cause of these problems (e.g., roads, landings, and stream crossings). Treatments are designed to restore natural fluvial and riparian topography and surface hydrology, thereby increasing the stability of the rehabilitation sites.

Inspectors trained in landform rehabilitation would conduct direct oversight of the work to ensure that the treatment designs are complete, have a stable geometry, and blend well into the surrounding natural topography. The risk of injury or death, or other adverse effects of ground rupture, shaking, liquefaction, and landslides would be less than significant as a result of this project. Conditions for seiche or tsunami do not exist because road removal locations are inland from water bodies. No volcanic hazards exist in the project vicinity.

- b) The purpose of the proposed work is to reduce soil erosion by restoring the natural topography and hydrology of the area. A temporary increase in surface erosion may occur at some locations because fill is re-exposed as part of the rehabilitation, but the loss should not be substantial. Topography would change from the existing disturbed condition; imprudent grading, excavation, or fill placement during the rehabilitation could initially affect natural topography. Minor side casting of mineral soil may bury some undisturbed topsoil downslope from the rehabilitated road; however the comparatively larger area of restored slope limits this impact. Overall, the work would diminish erosion; however, a temporary increase in soil erosion may occur as a result of construction activities and during the first winter season. Implementation of the mitigation measures indicated below would reduce any potential impacts to a less than significant level.

**Mitigation Measure Geo 1 Erosion Control**

- Best Management Practices (BMPs), consistent with RWQCB and State Park requirements, would be used in all areas to control soil and surface water runoff during excavation and any grading. If storms are anticipated during construction, "winterizing" will occur, including the covering (tarping) of any stockpiled soils and the use of temporary erosion control methods to protect disturbed soil. Temporary erosion control measures (BMPs) must be used during all soil disturbing activities and until all disturbed soil has been stabilized (recompacted, re-vegetated, etc.) These BMPs will include, but not be limited to, the use of silt fences, straw bales, or straw or rice coir rolls, to prevent soil loss and siltation into nearby water bodies.
- Permanent BMPs for erosion control will consist of properly compacting disturbed areas and revegetation of appropriate disturbed soil areas with native species. The State's contractor is responsible for providing the planned BMPs for DPR review and approval prior to the start of work.

- c) The project is located within a geologic unit with unstable soil; however, the goal of the project is to stabilize the slopes and reduce the potential for landslides and lateral spreading associated with landslide head-scarps. The general public and most DPR employees would not be exposed to any additional geologic hazard as a result of this proposed project. The Roads, Trails, and Resources Section Engineering Geologist has reviewed the project and identified sites with potential instability. The DPR-approved construction techniques and appropriate BMPs (see GEO-1 above) have been incorporated into the project to reduce the risks of landslides from the existing conditions. Liquefaction of recontoured material could occur if ground shaking took place during periods of high soil moisture. However, in such a situation, soils throughout the park would be susceptible to liquefaction and hazards from road treatments would only be slightly higher than other parts of the park. The project does not create conditions that would cause subsidence because all organic materials are removed before fill placement against cut banks. Soil and geologic conditions that could result in subsidence may exist at a few of the project sites. Removing buried organic material and removing fill material that may be susceptible to subsidence would stabilize these sites. The project would have a less than significant impact on geologic instability and, with

implementation of the following mitigation , adverse impacts to worker safety due to existing geologic instability would also be reduced to a less than significant level.

**Mitigation Measure Geo-2**

- All workers would be advised of high-risk areas and cautioned to use extreme care while working in those areas.
- All heavy equipment operators would be required to have experience working in conditions similar to the proposed project.
- A qualified inspector, trained in landform rehabilitation, would monitor equipment operation.
- Hand crews or other workers on the ground would be required to position themselves upslope of sites where excavations are actively under construction.
- Potentially unstable slopes that may occur naturally or result from the earthmoving process would be identified at the start of work and heavy equipment operators would be cautioned to minimize their exposure to these areas. Inspectors would continually evaluate slope geometry and caution operators if unstable conditions are indicated.

- d) Expansive soils do not exist in the project area. No structures are being constructed. No impact.
- e) No septic tanks or waste disposal systems would be constructed or impacted by this project. No waste disposal systems exist in the project sites. No impact.
- f) There are no known unique paleontological resources or sites or unique geologic features in the project area. No Impact

## VII. HAZARDS AND HAZARDOUS MATERIALS

### Environmental Setting

During timber operations of the previous landowners, hazardous materials were used and stored near the mill site. However, there are no known hazardous materials within the project area. No fuel storage facilities exist within or adjacent to the project area.

Physical hazards in the MCA are similar to any outdoor setting and include steep slopes, rushing water, poison plants, wild animals, disease carrying insects, and inclement weather. The project area is in a remote portion of Del Norte County and transportation to the nearest hospital would require an hour drive time from some locations. No airstrips exist within the park or adjacent to park property. Helicopter landing locations have been identified and geo-referenced throughout the park. U.S. Coast Guard helicopters patrol the coastline on a regular basis.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials, substances, or waste into the environment?				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				
d) Be located on a site which is included on a list of hazardous materials sites, compiled pursuant to Government Code §65962.5, and, as a result, create a significant hazard to the public or environment?				
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project result in a safety hazard for people residing or working in the project area?				
f) Be located in the vicinity of a private airstrip? If so, would the project result in a safety hazard for people residing or working in the project area?				
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				

<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
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- h) Expose people or structures to a significant risk of loss, injury, or death from wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

## Discussion

- a,b) The proposed project does not involve the disposal of hazardous materials. However, the project does involve the routine transportation of small amounts of diesel fuel to the work site. Construction activities would require the use of certain potentially hazardous materials, such as fuels, oils, and solvents. These materials are generally used for excavation equipment, generators, and other construction equipment and would be contained in vessels engineered for safe storage. Large quantities of these materials would not be stored at the construction site. Spills, upsets, or other construction-related accidents could result in a release of fuel or other hazardous substances into the environment. The mitigations indicated in HAZMAT 1 below would reduce the potential for adverse impacts from these incidents to a less than significant level.

### Mitigation Measures Hazmat-1

- All equipment would be inspected for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from park premises. Leaks that develop would be repaired immediately in the field or work with that equipment would be suspended until repairs could be made.
- An emergency spill response plan would be prepared prior to the start of construction and a spill kit maintained on-site throughout the life of the project, or provides multiple sets of cleanup materials to each crew, if sharing would prevent timely implementation of cleanup plans. In the event of any spill or release of any chemical in any physical form on or immediately adjacent to the project sites or within the MCA during construction, the contractor would immediately notify the appropriate DPR staff (e.g., project manager or supervisor) and implement the spill response plan. Appropriate agencies would be notified in the event of significant spillage.
- No maintenance or fueling activities would be permitted within 200 feet of a stream.
- Equipment would be cleaned and repaired (other than emergency repairs) outside the park boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds would be disposed of outside park boundaries, at a lawfully permitted or authorized destination.

- b) Although all discarded barrels discovered to date have been empty and pose no danger, there is still the potential to discover others containing unknown hazardous substances. Abandoned vehicles may also be found within the project sites. Implementation of the following mitigation measures, in conjunction with Hazmat-1 above, would reduce any potential impacts related to these finds to a less than significant level.

**Mitigation Measures Hazmat 2**

- If there is evidence of spillage from or free product discovered on or adjacent to the project sites, work would be halted or diverted from the immediate vicinity of the find and the Sector's hazardous materials coordinator would be contacted. Removal of all contaminants, including sludge, spill residue, or containers, would be conducted following established DPR procedures and in compliance with all local, state, and federal regulations and guidelines regarding the handling and disposal of hazardous materials. Work would not resume until required avoidance and/or mitigation measures have been identified and implemented.
- Abandoned vehicles located within the project sites would be removed and disposed of under the supervision of the hazardous materials coordinator. Any associated fuel or hazardous materials would be handled in a manner consistent with the spill plan and/or requirements indicated above.

- c) The project is not located within one-quarter mile of any school and no schools are proposed for this area. No impact.
- d) The road treatment sites in the MCA are not included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5. Therefore, no impact would occur with project development.
- e) The project sites are not located within the vicinity of a private air strip. Therefore, no impact would occur as a result of this project.
- f) The project sites are not located within an airport land use plan, within two miles of a public airport, or in the vicinity of a private air strip. Therefore, no impact would occur as a result of this project.
- g) All construction activities associated with the project would occur within the boundaries of the MCA and work would not restrict access to or block any public road. Access to the project sites is limited and the roads proposed for treatment are not part of any emergency response or evacuation plan. A general safety protocol for backcountry heavy equipment operations has been adopted by the NCRD for use within state parks, including the MCA, and would be implemented as part of this project. This protocol outlines broad safety issues common to all projects and presents guidelines on how to address those issues. It also requires project managers to develop a project specific safety plan for each rehabilitation project, including the identification of any existing emergency response plans. The project is designed and would be implemented to avoid any conflicts with existing plans or increase in emergency response time. Emergency response requirements for this project would be no greater than for any other backcountry activities.

Workers spend most of their work hours in remote wildland settings and may be exposed to natural hazards consistent with that environment (e.g., wild animals, insects, noxious plants,

lightning, wind, etc.). However, all employees are issued first aid kits and are

trained how to respond to anticipated and unanticipated incidents. Employees are also asked to disclose any sensitivity that might affect their employment tasks or increase the potential need for emergency medical care. Therefore, the impact of this project on an emergency response or evacuation plan would be less than significant.

- h) Heavy equipment can get very hot during the warmer part of the work season and is sometimes in close proximity to flammable vegetation. Improperly outfitted exhaust systems or friction between metal parts crushing rocks could generate sparks. The safety plan developed for each project is reviewed by all project staff and includes job site characteristics to reduce the potential for fire. The following mitigations would reduce the potential for adverse impacts from these incidents to a less than significant level.

<b>Mitigation Measure Hazmat-3 Fire Safety Plan</b>
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|---|
| <ul style="list-style-type: none"><li>• A fire safety plan would be in place prior to the start of any construction, including availability of identified fire suppression equipment and any required employee training.</li><li>• Spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers would be required for all heavy equipment.</li><li>• Construction crews would be required to park vehicles away from flammable material, such as dry grass and brush. At the end of each workday, heavy equipment would be parked over mineral soil to reduce the chance of fire. All equipment would be required to be mechanically sound and free of flammable debris.</li><li>• Park staff would be required to have a State Park radio on site, which allows direct contact to California Department of Forestry and Fire Protection and centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire.</li></ul> |
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## VIII. HYDROLOGY AND WATER QUALITY

### Environmental Setting

Water quality in the MCA ranges from extremely clear and free of any pollutants, in streams that drain from old growth forests, to turbid, very poor quality in areas previously impacted by humans. The North Coast Regional Water Quality Control Board (RWQCB) regulates water quality in the area of California where the park is located.

Precipitation in the park occurs primarily in the six months from November through April. Summer showers are infrequent, with winter rainfall accumulations of up to 80 inches. During the summer months, a thick fog frequently blankets the coastal areas. The prevailing wind direction is northwesterly during the spring, summer, and fall and shifts to southeasterly during the winter season. Wind speed along the coast is typically 15 to 25 mph, with gusts up to 50 mph during winter storms.

Ground water in the park is relatively free of pollutants and considered very high quality because very few potential pollution sources exist. The groundwater table in the park fluctuates annually, depending on rainfall and seasonal temperatures and varies throughout the area because of the geological or topographical influences. The area does not serve to recharge commercially available aquifers. There are no public water sources in the area impacted by the proposed project.

Watersheds scientists have long recognized the impact of road building associated with logging activities throughout watersheds in the Pacific Northwest. Abandoned logging roads and poorly designed legacy service roads in the MCA watersheds are causing accelerated erosion and sediment delivery to the drainage network. Quantitative field assessments throughout the watersheds have revealed that disrupted surface hydrology is the primary agent, causing accelerated erosion from failed stream crossings, landslides from diverted runoff, and severe gullyng of abandoned road surfaces.

California State Parks has conducted numerous watershed rehabilitation projects in the North Coast Redwoods District to reduce road related failures in the past. Ongoing qualitative review and reporting on past projects has revealed increased slope stability, reduction in soil erosion, a reduction in sediment sources, rapid natural revegetation, and increased aquatic habitat in watersheds where road removal activities have occurred. State Parks, Redwood National and State Parks, BLM, USFS, and numerous private engineering firms have conducted research and road rehabilitation, and have documented similar results in other watersheds. The results of the ongoing road rehabilitation work indicate high levels of success in improving hydrologic and geomorphic function, and enhancing aquatic and terrestrial habitat.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Violate any water quality standards or waste discharge requirements?				
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?				
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?				
d) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?				
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				
f) Substantially degrade water quality?				
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map?				
h) Place structures that would impede or redirect flood flows within a 100-year flood hazard area?				
i) Expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam?				
j) Result in inundation by seiche, tsunami, or mudflow?				

### Discussion

- a) The project would be in compliance with all applicable water quality standards and waste discharge requirements. (See Mitigation Measures Hazmat 1-3 regarding potential impacts from accidents, spills, or upset.). The project would result in a net decrease in non-point source pollution. Road rehabilitation is a specific management measure for the control of polluted runoff by the California Water Resources Control Board. The project is designed to reduce surface erosion and information generated by this and similar projects are assisting

the State in developing techniques to achieve the Total Maximum Daily Load (TMDL). Project work would be accomplished during the dry season, further lessening any

chance of impact to surface water quality. The project scope does not include waste discharge work of any kind. Project location, design, and timing, in combination with the Hazmat mitigation measures indicated above for accidental hazardous material exposure, would result in a less than significant impact to water quality and waste discharge.

- b) The project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. Any water drafting by water trucks would be in compliance with requirements of the stream alteration agreement and Water Drafting Specifications from NOAA Fisheries (2001). Groundwater quantity may be influenced by changes in surface drainage patterns and/or changes in porosity of earth materials at fill sites. Increasing surface flows in certain locations through reconnection of channels would alter existing groundwater conditions at both the reconnected and the abandoned channel site. Newly restored fills would experience a period of interactive adjustment to groundwater flows as the fills consolidate over time; however, in the long term, both the fill and groundwater flows would evolve toward their pre-disturbance patterns. Fills would be compacted during their placement to speed this process of consolidation. Changes in the direction or rate of groundwater flow may be influenced by changes in surface drainage patterns. However, a qualified engineering geologist has reviewed the sites to ensure that site and offsite conditions would be enhanced by the work (i.e., reestablishing pre-disturbance conditions within limits of post-disturbance change). Substantial short-term reductions in the amount of groundwater otherwise available for public water supplies would not occur as a result of the project, and the amount of groundwater would eventually increase, due to the elimination of compacted road surfaces. Mill Creek sub-watersheds are not used for any public water supply and no Park water systems would be impacted. The water table adjacent to the crossing excavation may be lowered as saturated crossing fill is removed from the stream channel; however, this effect would be localized around the crossing site. Prior to construction, park staff familiar with the location of waterlines, would clearly mark the location of water systems or would show the project inspector personally. Impact of the project on groundwater supplies would be less than significant.
- c) Existing (altered) drainage patterns generally would be restored to pre-disturbance patterns. In some cases, where pre-disturbance patterns cannot be restored, rehabilitation work may require the realignment of a stream segment. Reconnecting diverted streams to their natural flow pattern would increase discharge in abandoned channels. However, significant geomorphic adjustments are not likely to occur due to the increased discharge, because the reoccupied channels had originally formed under the post-treatment flow regime. Offsite effects of reestablishing pre-disturbance drainage patterns and discharge have been evaluated to ensure increased discharge would not adversely impact fluvial geomorphic functioning downstream. The following mitigations would reduce the potential for adverse impacts to a less than significant level.

**Mitigation Measures Hydro-1**

- Cutbanks exposing seeps or springs would not be recontoured. Instead, the embankment fill adjacent to the wet area would be exported to nearby dry sections of the road. An outsloped cutbench would extend along all wet road sections. No vegetation would be removed within 25 feet of a spring that emanates from a cut slope.
- If a long section of road were not suitable for full recontouring, the excavator would remove the embankment fill and load it into a dump truck to be end-hauled to a stable location on a nearby site proposed for recontouring. The excavator and dozer recover the entire embankment fill and outslope the cutbench of the road. On steep linear road grades, broad swales would be constructed along the road at appropriate locations to convey flow into natural drainage features below the road.
- Road sections immediately adjacent to stream crossings would not be fully recontoured. Instead, the fill would be tapered toward the crossing and the cutbank laid back to a more stable slope. This reduces the slope on each side of the crossing, decreasing the chance for direct sediment delivery if a post-treatment slope failure should occur.
- If the stream has running water, it would be diverted away from excavation areas to reduce turbidity and returned to the channel immediately downstream. Where channel widths are wide enough, a berm would be constructed to divert water away from the work area. Where channels are narrow, a small diversion dam would be built upstream and stream flow piped around the worksite and discharged into the stream below the worksite. Instream filters would be installed where diversion is not possible. The project inspector would carefully monitor the structures to prevent failures.
- If the crossing has already partially failed, a small road bench would be reconstructed along the upstream end of the crossing to allow access to both sides of the crossing. A minimal amount of fill would be used and streamflow (if present) piped around the site or a culvert installed to convey streamflow under the temporary road.
- Logs and rocks would not be placed in the excavated channel because they cause lateral migration resulting in bank erosion. Instead, logs would be placed on the channel margins or span the removed crossing.
- All temporary berms, ponds, and piping would be completely removed at the completion of construction.

- d) The project is designed to reduce peak runoff events and, combined with completion of the work during the dry season, would eliminate the possibility of project-related flooding on- or off-site. The work would significantly reduce compacted surfaces, increasing soil permeability and allowing rainwater to percolate into the soil. The work would eliminate unnatural concentrations of flow onto unstable slopes, thereby reducing peak runoff events. Runoff would be more naturally dispersed across the landscape and restored to natural flow paths. Stream diversions would be restricted to temporary ponding during periods of low flow (see Geo-2 and Hydro-1 above). Although alterations of existing drainage patterns would occur as a result of this project, the intent of the project is to restore natural, pre-disturbance patterns that correct destructive flow. Less than significant impact.
- e) The project would not create or contribute runoff water in amounts that would exceed the

capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff. (See Discussion VIII(d) above.) No stormwater systems exist downslope from the project. No impact.

- f) The project, in and of itself, reduces soil erosion and sediment inputs to streams, thereby improving water quality once construction is complete and natural revegetation has occurred. However, there is the potential for short-term sedimentation and the accidental spillage of toxic substances (e.g., diesel fuel and hydraulic oil) during the construction process.

Diesel fuel and hydraulic oil are used in the heavy equipment, and are transported each day to the project site, using truck-mounted tanks. Diesel fuel is pumped from the truck to the equipment daily and involves a low potential for spillage. Hydraulic oils would be transported in five-gallon buckets, and would be available on-site, should accidental hose rupture require equipment oil tanks to be refilled. The potential to degrade water quality with these products is small because of the comparatively small volumes used at one time. Fuel spills could occur if a piece of equipment crashed or overturned. The likelihood of this occurring is low because of operator experience requirements. Oil spills may also occur during stream channel excavations. However, these are usually the result of limbs from trees becoming entangled in excavator hydraulics, and crossings generally are more open and have less potential for entanglement. (See Mitigation Measures Hazmat 1-3 regarding potential impacts from accidents, spills, or upset.)

Storm flow turbidity levels in the MCA tributaries are high, due to past watershed disturbances, and the minor surface erosion of recontoured slopes and stream channel adjustments would have a small effect on turbidity levels. Short-term increases of turbidity may occur; however, long-term rates of turbidity would be higher without the work. The cumulative effect of crossing removal is an overall decrease in turbidity and improvement of aquatic habitat. Work may occur in flowing streams as part of culvert or crossing removal. Flow in most crossings is generally very low during the projected work period (late summer/early fall) and precautions would be taken to minimize exposure of equipment and personnel to flow. The average length of stream channel affected by crossing removal is approximately 100 feet in length. The work would also be spread over a three-year period, so that turbidity impacts to all of the Park's watersheds would be spread out over time.

Water quality would be improved as the rehabilitation process is implemented within an impacted watershed. However, a short-term increase in suspended sediment and bed load would occur downstream of the rehabilitation sites that are directly adjacent to streams, following rehabilitation work. The effects would be limited to the first winter following treatment and, in most cases, to the first runoff-generating event of the winter. The minor surface erosion of recontoured slopes and stream channel adjustments would have minimal effect on current sediment levels. The effect on aquatic habitat would be apparent immediately downstream of the rehabilitation sites, but typically would not extend more than several hundred feet downstream. Sediment delivery from road segments not directly adjacent to streams would be captured by native in-situ mulch and micro-topography.

Long-term transport rates of suspended load and bed load would be higher without rehabilitation work in other parts of the watershed (Madej, 2000). The cumulative long-term effect of removing stream crossings on water quality would be a reduction in suspended and bed load transport, improved fluvial-geomorphic functioning, and an improvement in the aquatic habitat throughout the drainage network.

Adaptive management through monitoring of treatment sites is an integral component of the NCRD's road rehabilitation program. All stream crossing sites would be photo documented following treatment. The photo documentation would allow assessment of post treatment responses so that refinements could be made to treatment techniques in on future projects. In addition, all treatment sites are reviewed during the winter following treatment and as needed during subsequent winters to monitor potential post-treatment adjustments.

Implementation of the following mitigation measures, in conjunction with those in Hazmat 1-3 and Geo-1-2, would reduce the project's potential adverse impacts to a less than significant level.

<b>Mitigation Measures Hydro-2</b>
<ul style="list-style-type: none"> <li>• Following October 15<sup>th</sup> of any work year, any roads remaining open to service vehicles would be winterized by installing rolling dips at all stream and swale crossings; portions of the outside berm would be removed to allow drainage and any unstable fill would be pulled back from stream crossings.</li> <li>• Following October 15<sup>th</sup> of any work year, work would not proceed in any area where soils have become saturated. Construction work would generally be limited to the dry periods of the year, when rain is unlikely.</li> <li>• All stream crossing sites will be photo-documented following treatment to enable rough-estimate, quantitative assessment of post-treatment adjustments. All stream crossing sites will be reviewed in the field during the first winter following treatment to identify any deficiencies in treatment or treatment techniques.</li> </ul>



- g) The project does not involve housing or construction of any structure designed for human occupation. No impact.
- h) See Discussion VIII(g) above. No impact.
- i) The project would not expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam. The project is designed to reduce downstream flooding and no levee or dam is involved with the project. Only small sediment filters and collection pools for temporary water diversion around construction sites would be used. The project reduces the potential for future catastrophic flood events in the Mill Creek sub-watersheds by reducing peak discharge and reducing sediment sources. No adverse impact.

- j) The project would not result in inundation by seiche, tsunami, or mudflow because the sites are located above 400 feet in elevation, are inland from any water body, and would be designed to limit the risk of mudflow through application of geologic engineering techniques. Work would occur during dry periods or non-saturation to limit workers exposure to mudflow. The project is designed to eliminate the potential for mudflow by compacting recontoured fill, placing fill away from springs or seeps, and/or placing fill on a flat, de-compacted surface. Less than significant impact.

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## IX. LAND USE AND PLANNING

### Environmental Setting

The proposed project is located within the boundaries of the MCA, which has an unclassified DPR land use designation at this time. The intended purpose of land is to preserve outstanding natural, scenic, and cultural values, and indigenous aquatic and terrestrial fauna and flora. No State Park General Management Plan currently exists for the unit, but DPR's Resource Management Directives define the techniques to be used in restoration of natural resources. The area is zoned for recreation in Del Norte County. In addition to resource preservation, the park will be used for future public recreation. The project sites are located in areas that are undeveloped and not used by visitors.

The Mill Creek property is located approximately 10 km (6 mi) southeast of Crescent City in Del Norte County, California. The property directly links large areas of old-growth coast redwood forest within Redwood National and State Parks with National Forests located in the western Klamath-Siskiyou Mountains. The property is bordered by Jedediah Smith Redwoods State Park to the north, Del Norte Coast Redwoods State Park to the west, Six Rivers National Forest to the east, and private industrial timber lands to the south (Figure 1-1). It also encompasses a large portion of the Mill Creek watershed tributary to the Smith River and Rock Creek watershed tributary to the South Fork Smith River, along with small headwater portions of the Terwar, Hunter, and Wilson Creek watersheds.

Miller Timber Company bought the Mill Creek tract from Hobbs, Wall, & Company in the early 1940s and the Rock Creek tract from Jones Timber Company around 1965. Between 1954 and 2000, the property was intensively managed for commercial timber harvest that included constructing an extensive road network and converting most of the property from old-growth to early-successional coniferous forest. Approximately 100 acres of old-growth redwood and Douglas-fir forest presently occur in five separate stands. In 2001, Save the Redwoods League (SRL) negotiated an option to purchase the Mill Creek property from Stimson Lumber Company (Stimson). Sale of the property was finalized in June 2002, at which time the entire property transferred to State ownership under DPR stewardship.

Following acquisition, Interim Management Recommendations (IMR) were developed and are now in place to guide protection, restoration, and public use of the Mill Creek property until DPR adopts a General Management Plan for the area.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Physically divide an established community?				
b) Conflict with the applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning				

ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

<u>POTENTIALLY</u> <u>SIGNIFICANT</u> <u>IMPACT</u>	<u>LESS THAN</u> <u>SIGNIFICANT</u> <u>WITH</u> <u>MITIGATION</u>	<u>LESS THAN</u> <u>SIGNIFICANT</u> <u>IMPACT</u>	<u>NO</u> <u>IMPACT</u>
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- c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

## Discussion

- a) The project would not physically divide an established community because no community exists within the project boundary. No impact.
- b) Several past and present plans address natural resource management of the Mill Creek property or adjacent public lands. These plans were reviewed during the development of these IMR and are described briefly below.

Stimson Lumber Company prepared a Draft Multi-Species Habitat Conservation Plan (HCP) for timberlands in Del Norte County, California in support of an application for an ITP under the ESA and a 2081(b) permit under CESA (Stimson Lumber Company 1998). The HCP summarized existing physical and biological information for the property, as well as potential impacts to threatened, endangered, and other special-status species that could result from timber harvest activities. The HCP did not undergo a public review process and was not finalized by Stimson or federal and state agencies.

The Smith River National Recreation Area (SRNRA) was established as part of the Six Rivers Land and Resource Management Plan (SRLRMP) to "ensure the preservation, protection, enhancement, and interpretation of the Smith River's wild and scenic rivers, ecological diversity, and recreational opportunities while providing for wise use and sustained productivity of its natural resources" (USDA Forest Service 1995). The SRLRMP provides management guidance for a 10- to 15-year interim period.

The Smith River Anadromous Fish Action Plan was prepared by the Smith River Advisory Council to maintain and enhance anadromous fish populations in the Smith River (SRAC 2002). The plan addresses anadromous salmonid habitat quality and quantity, watershed conditions, and public land management in the Mill Creek area. Goals established in the plan include (1) assessing watershed conditions in the Smith River estuary and tributaries, (2) identifying existing data gaps, (3) formulating management and monitoring recommendations, (4) maintaining natural resource-based economies, and (5) community participation in natural resources management and restoration.

Redwood National Park, Jedediah Smith Redwoods State Park, Del Norte Coast Redwoods State Park, and Prairie Creek Redwoods State Park are cooperatively managed under an Memorandum Of Understanding (MOU) between the NPS and DPR (RNSP 1996). The MOU includes lands within the congressionally authorized boundary of Redwood National Park,

referred to as Redwood National and State Parks. Joint state and federal management is intended to enhance protection of park resources and improve public service using combined state and federal resources. A General Management Plan

and Environmental Impact Statement/Environmental Impact Report were prepared by the Redwood National and State Parks to provide “a defined, coordinated direction for resource preservation and visitor use and a basic foundation for decision making and managing for the following 15 to 20 years” (RNSP 1999). The joint plan, approved in 2000, covers approximately 427 square kilometers (165 square miles) and focuses on park establishment, cooperative management of park resources, and the visitor experience.

Throughout the Redwood National and State Parks, second-growth conifer forests have established following timber harvest that occurred prior to state and federal acquisition (RNSP 1996). Late-successional forest characteristics and associated ecological values are generally lacking and develop slowly in these dense second-growth forests. RNSP developed a Draft Second-Growth Forest Recovery Plan with the goal of accelerating recovery of late-successional characteristics in these areas through silvicultural treatments. The draft plan assesses the benefits and potential impacts of vegetation management alternatives, including a no treatment alternative.

The project would not conflict with any land use plan, policy, or regulation of any agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect, and is consistent with planning documents discussed above. In general, this project is designed to meet a critical resource protection need, and no land use plans have been implemented to regulate road removal. State and federal laws regulate environmental and worker safety aspects of the construction; however, the project would be consistent with all applicable laws and regulations. No impact.

- c) The project would not conflict with any applicable habitat conservation plan or natural community conservation plan and is consistent with the goals of the existing plans for fish habitat restoration and erosion control. No impact.

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## X. MINERAL RESOURCES

### Environmental Setting

No significant mineral resources have been identified within the boundaries of the MCA. Mineral resource extraction is not permitted within State Park property, under the DPR's Resource Management Directives.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Result in the loss of availability of a known mineral resource that is or would be of value to the region and the residents of the state?				
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				

### Discussion

- a) The project would not result in the loss of availability of a known mineral resource because no known mineral resources exist within the park. No impact.
- b) The project would not result in the loss of availability of a locally important mineral resource recovery site because none exist within the park. No impact.

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## XI. NOISE

### Environmental Setting

The MCA is located in rugged forested terrain in northern California, surrounded by steep mountains and the Pacific Ocean. Existing noise affecting the project area results from administrative use on park roads, occasional air traffic, consisting of small private planes, Coast Guard helicopters, and CDF firefighting aircraft.

This park, including portions of the project area, contains special status species that can be adversely affected by excessive noise during their nesting and breeding seasons. The USFWS has developed guidelines for eliminating noise impacts to threatened and endangered wildlife species in this area. These guidelines include seasonal restrictions on the use of heavy equipment in potential habitat and/or during periods of nesting or the early phase of rearing of young.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Generate or expose people to noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?				
b) Generate or expose people to excessive groundborne vibrations or groundborne noise levels?				
c) Create a substantial permanent increase in ambient noise levels in the vicinity of the project (above levels without the project)?				
d) Create a substantial temporary or periodic increase in ambient noise levels in the vicinity of the project, in excess of noise levels existing without the project?				
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project expose people residing or working in the project area to excessive noise levels?				
f) Be in the vicinity of a private airstrip? If so, would the project expose people residing or working in the project area to excessive noise levels?				

### Discussion

- a) Construction noise levels at and near the project area would fluctuate, depending on the type and number of construction equipment operating at any given time. There are no noise-sensitive human land uses located in the vicinity of the project site that would be substantially effected by the proposed construction-related activities and no known noise standards

applicable to this area (other than species-related noise restrictions - see Mitigation Measure Bio-3). However, depending on the specific construction activities being performed, short-term increases in ambient noise levels could result in speech interference near the project site. Implementation of the following mitigations would reduce the any potential adverse impacts to a less than significant level.

<b>Mitigation Measures Noise-1</b>
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- |  |
|--|
| <ul style="list-style-type: none"> <li>• Construction activities would generally be limited to the hours between 6 a.m. and 6 p.m.</li> <li>• Internal combustion engines used for any purpose at the job site would be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for construction would utilize the best available noise control techniques (e.g., engine enclosures, acoustically-attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.</li> <li>• Stationary noise sources and staging areas would be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources would be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds.</li> </ul> |
|--|

- b) The project would not generate or expose people to excessive groundborne vibrations or groundborne noise levels because only a few relatively small pieces of heavy equipment would be operating at any one time. The sizes of the machines used would not generate excessive vibrations. Less than significant impact.
- c) Project-related noise would only occur during actual construction. Once construction is completed, all noise-generating equipment would be removed from the site. The project would not create any source that would contribute to a substantial permanent increase in ambient noise levels in the vicinity of the project. No impact.
- d) See Discussion XI(a) above. No more than ten pieces of heavy equipment would be operating on this project at any one time throughout the park. The project sites would be closed to the public during construction and only construction workers would be affected by the equipment noise. Because the sites are primarily in thick second growth forests, noise travels only a short distance before it becomes muffled by vegetation and wind. The work sites are well away from campgrounds and visitor use areas. Because the equipment usually moves about 300 to 1000 feet per day, noise impacts would be transitory. The USFWS would provide technical assistance on this project regarding noise impacts to wildlife prior to construction implementation. The USFWS staff has visited all recent past road rehabilitation projects proposed by the NCRD, including this project. Implementation of the mitigations indicated in Mitigation Measures Bio-3 and Noise-1 would reduce any potential impacts to a less than significant level.
- e,f) The project is not within an airport land use plan and is not within two miles of an airport or private air strip; therefore, the project would have no impact.



## XII. POPULATION AND HOUSING

### Environmental Setting

The project area does not contain any structures. No other housing exists within the project area and no housing developments are planned at this time. Future land acquisitions in the area may include residential buildings or other structures, but such acquisitions are not related to or dependent on the proposed project. The entire project area is owned by State Parks.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				

### Discussion

a,b,c) The project would not induce substantial population growth because the project does not involve housing or new businesses. The project would have no more than 15 employees working at one time during the summer months. No replacement housing would be required, because all workers already maintain housing in the region or provide their own temporary facilities. Occasionally, contract workers may camp on-site in travel trailers during the construction phase. The trailers are required to be self-contained and are located on existing roads, landings, or other areas used by seasonal work crews. No people would be displaced because the project only involves removal of abandoned logging roads that have no access or use by residences. All work would take place within the confines of the park boundaries, with no additions or changes to the existing local infrastructure. Therefore, the project would have no impact on population growth or housing requirements in the area.

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### XIII. PUBLIC SERVICES

#### Environmental Setting

The watersheds proposed for rehabilitation are on steep hill slopes, covered in thick brush and second growth forest. The roads proposed for removal have been winterized prior to park acquisition by DPR and are covered with brush and impassable at many locations. Many of the stream crossings have failed during flood events and are impassable to vehicles and most hikers. Except for 4<sup>th</sup> Switchback Road, the roads proposed for removal are not passable to fire suppression vehicles and would involve a much higher level of funding than is ever anticipated in any future DPR budget to open and maintain.

The NCRD maintains a network of service roads for use by fire suppression crews, ranger patrol, and for access to a few power lines traversing the park. These roads will eventually be reengineered as part of a comprehensive road management plan, to provide improved drainage and a hardened base. These roads are not included in this project.

Conditions on the roads proposed for removal present a hazard to anyone who might attempt to hike the abandoned roads. Some portions of the roads remain in good condition and could attract visitors (once allowed into the park) into potentially dangerous areas. Access to these locations is difficult in an emergency.

Although there are no staff permanently assigned to this park, routine ranger patrols and road monitoring patrols do take place. The California Department of Forestry and Fire Protection (CDF) provides fire protection for the project areas. CDF maintains a fire station in Crescent City, approximately 20 miles from the project location. The CDF Air Attack base is located in Rohnerville, approximately 50 air miles from the MCA.

No schools exist within the project area and the nearest school is over 10 miles away from the work sites, in Crescent City.

<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
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#### Would the project:

- a) Result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

## Discussion

- a) Permanently closing and removing roads that are now overgrown with vegetation would reduce the potential for human-induced forest fires within the Park. A network of fire roads in the park would remain open to service and emergency vehicles only, and would be maintained in good travel condition. By removing features associated with abandoned roads, such as cut-slopes and gullies, fire line construction in the event of a wildfire would be easier to plan and construct in locations desirable for the ideal layout. The CDF Air Attack Base in Rohnerville is approximately 50 miles from the MCA, providing a relatively rapid response time in case of a fire. During the construction phase, DPR staff would have park radios on site at all times to ensure immediate direct contact to CDF fire dispatchers and crews. All heavy equipment and service vehicles would be required to carry a fire extinguisher and hand tools. (See Mitigation Measure Hazmat-3.) . The project would have a less than significant impact on fire protection.

No additional demands on Rangers or local police are expected as a result of this project.

No schools exist within or adjacent to the project area. No changes would occur that would effect existing schools or require additional schools or school personnel. No impact.

The project would improve the MCA by protecting the natural resources of the park. The project would improve the aesthetic quality of the slopes, improve visitor safety, reduce sediment sources and downstream flooding, and encourage natural revegetation. Since no public use areas would be closed or access limited as a result of this project, no other parks in the area should show a related increase in use. No adverse impact would occur at the MCA or any other public facilities as a result of this project.

The project, as a whole, or in part, would have a less than significant effect on any public services.

#### XIV. RECREATION

##### Environmental Setting

The MCA is not open to the general public at this time. Occasional guided tours are provided to allow public access to the acquisition. The areas that would be affected by the proposed project are undeveloped, relatively inaccessible, and rarely used by visitors.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?				
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				

##### Discussion

- a) As a new acquisition, without developed facilities, the areas that would be impacted by the proposed project receive very few visitors. Therefore, the closure of this area to the public during project activities would result in few, if any, visitors being diverted to surrounding parks and would have only a negligible impact on other recreational facilities in the area. Less than significant impact. .
- b) The project does not include the construction of recreational facilities or the expansion of any facility; therefore, no impact would occur.

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## XV. TRANSPORTATION/TRAFFIC

### Environmental Setting

The roads proposed for rehabilitation do not serve as transportation routes and have been privately owned and controlled for over 40 years. Most are overgrown with brush and scattered small trees and many stream crossings are impassable. Numerous other stream crossings have already failed and large gullies exist along some of the roads. Landslides and other mass wasting have also blocked some of the roads.

Except for 4<sup>th</sup> Switchback Road, all of the roads in this project are abandoned and impassable to traffic. 4<sup>th</sup> Switchback Road is one of several roads that access the northwestern portion of the acquisition. Childs Hill Road, Boulder Road, and Section 1 Road access the 4<sup>th</sup> Switchback area from all directions.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Cause a substantial increase in traffic, in relation to existing traffic and the capacity of the street system (i.e., a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				
b) Exceed, individually or cumulatively, the level of service standards established by the county congestion management agency for designated roads or highways?				
c) Cause a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?				
d) Contain a design feature (e.g., sharp curves or a dangerous intersection) or incompatible uses (e.g., farm equipment) that would substantially increase hazards?				
e) Result in inadequate emergency access?				
f) Result in inadequate parking capacity?				
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				

### Discussion

- a,b) Most construction equipment and vehicle activity would originate from park maintenance facilities and would not require movement on any public street. Any movement of equipment from outside the park would occur during off-peak, daylight hours and equipment would, in most cases, remain on-site for the duration of the work in a specific area. Crew size is limited and a portion of the crew would remain on-site, reducing daily individual vehicle travel to and

from the work site. The addition of several vehicles entering

and leaving the MCA during daylight hours over the course of several months each year would not constitute a substantial increase in traffic volume or result in congestion. Less than significant impact.

- b) The project would not cause a significant increase in the number of vehicles or frequency of travel on public roads in the vicinity of the project, or cause traffic levels to exceed, individually or cumulatively, the level of service standards for existing roads or highways. Less than significant impact.
- c) The project sites are not located within an airport land use plan, within two miles of a public airport, or in the vicinity of a private air strip, and do not serve as a normal reporting point for air traffic in the area. Nothing in the proposed project would in any way affect or change existing air traffic patterns; therefore, no impact would occur as a result of this project.
- d) The project does not contain a design feature or incompatible uses that would substantially increase traffic hazards. Roads proposed for removal have been closed for over 10 years and do not provide access to facilities, recreation sites, utilities, or private land. None of the roads would be reopened as a result of this project. No impact.
- e) The project would not change existing emergency access routes or interfere with current procedures for emergency response in the project areas. Roads proposed for removal are already closed and inaccessible to emergency vehicles or are served by other routes such as Childs Hill Road, Boulder Road, and Section 1 Road. The work would not disrupt normal emergency access to any portion of the park. No impact.
- f) The project would not result in inadequate parking capacity because it does not involve public access or public uses. The construction workers on this project would park service vehicles close to the work site and move the vehicle down the road a few hundred feet every couple of hours as work progresses. No impact.
- g) The project would not conflict with adopted policies, plans, or programs supporting alternative transportation because it does not reduce or increase transportation uses. No impact.

## XVI. UTILITIES AND SERVICE SYSTEMS

### Environmental Setting

The project roads or work sites do not contain any utilities or service systems. The area is a second growth forest in a remote wildland setting.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Exceed wastewater treatment restrictions or standards of the applicable Regional Water Quality Control Board?				
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities?  Would the construction of these facilities cause significant environmental effects?				
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities?  Would the construction of these facilities cause significant environmental effects?				
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?				
e) Result in a determination, by the wastewater treatment provider that serves or may serve the project, that it has adequate capacity to service the project's anticipated demand, in addition to the provider's existing commitments?				
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				
g) Comply with federal, state, and local statutes and regulations as they relate to solid waste?				

### Discussion

- a-b) There are no wastewater treatment facilities or services at any of the proposed project sites. Portable toilets will be transported to and from the sites as needed and serviced in accordance with local and state wastewater treatment requirements. No impact.
- c) The project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities because no stormwater facilities are needed. No impact.

- d) Water for crew consumption and limited construction needs would be negligible and provided from existing park sources. Less than significant impact.
- e-g) Wastewater treatment would be provided by the portable toilet contractor and would have minimal impact on the provider's current usage. There would be no solid waste from construction activities and daily garbage from workers would be deposited in existing facilities or hauled off site and disposed of as part of the current park entitlement. The existing landfill is sufficient to accommodate this minimal increase and all solid waste would be disposed of in compliance with federal, state, and local statutes and regulations. Less than significant impact.

## Chapter 4

### MANDATORY FINDINGS OF SIGNIFICANCE

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
<b>Would the project:</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal?				
b) Have the potential to eliminate important examples of the major periods of California history or prehistory?				
c) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probably future projects?)				
d) Have environmental effects that would cause substantial adverse effects on humans, either directly or indirectly?				

#### Discussion

- a) The proposed project was evaluated for potential significant adverse impacts to the natural environment and was determined to have the potential to temporarily degrade the quality of the environment and adversely affect special-status plant and animal species. The project also has the potential to disrupt established drainage patterns; temporarily increase siltation, directional runoff, and erosion; and reduce the number of a special status plant. However, full implementation of all mitigation measures incorporated into this project would avoid or reduce these potential impacts to a less than significant level.
- b) The proposed project has been evaluated for potential significant impacts to cultural resources. It has been determined that, with implementation of all proposed mitigation measures, no examples of significant cultural resources would be significantly impacted by the project
- c) DPR has other smaller maintenance programs and rehabilitation projects, as well as routine, ongoing maintenance, planned for this park unit in the foreseeable future. However, full implementation of all mitigation measures incorporated into this project would reduce any potential cumulative impacts to a less than significant level. Impacts from environmental issues addressed in this evaluation do not overlap on-going or future projects in such a way as to result in cumulative adverse impacts that are greater than the sum of the parts. Less than

significant impact.

- d) Most project-related environmental effects have been determined to pose a less than significant impact on humans. However, possible impacts from construction accidents and fire (Hazards and Hazardous Waste), landslides and earthquakes (Geology and Soils), sedimentation (Water Quality), and noise, though temporary in nature, have the potential to result in significant adverse effects on humans. These potentially significant adverse impacts would be reduced to a less than significant level with the full implementation of all mitigation measures incorporated into this project.

## **Chapter 5**

### **Summary of Mitigation Measures**

The following mitigation measures would be implemented by DPR as part of the Bummer Switchback Road Removal Project in the MCA.

#### **Air Quality**

##### **Mitigation Measures Air-1**

- All equipment engines would be maintained in good condition, in proper tune (according to manufacturer's specifications), and in compliance with all State and federal requirements.
- Traffic speed on unpaved roads would be limited to 15 miles per hour (mph).
- Excavation and grading activities would be suspended when sustained winds exceed 25 mph, instantaneous gusts exceed 35 mph, or when dust from construction might obscure driver visibility on public roads.
- No more than eight pieces of heavy equipment would operate at the sites at the same time. No more than ten service vehicles would enter the project site at one time.

#### **Biological Resources**

##### **Mitigation Measures Bio-1 (plants)**

- Plant surveys will be conducted throughout the MCA on all road removal and stream crossing construction sites and special status plant occurrences will be mapped and flagged.
- Surveys would be conducted by a qualified botanist and would take place during the flowering season to ensure the proper identification of species.
- If rare plants are found within the construction footprint, they would be avoided to the maximum extent practicable. If avoidance is not possible the Department of Fish and Game will be consulted to determine how to proceed.
- Final reports are required on all biological surveys conducted by consultants or contractors. All surveys shall include accurately mapped populations and be referenced to clearly flagged locations in the field.

##### **Mitigation Measures Bio-2 (Fish)**

- Stream crossing excavations would take place in dry channels or in channels where stream flow is diverted around the excavation sites. Excavations have been designed to limit negative effects on water quality to the maximum extent practicable.
- In some crossings, where the stream is flowing at a slow rate and cannot be captured and diverted, filter structures would be installed downstream to filter turbid discharge from the worksite. In other crossings, where flow is sufficient to be intercepted, a small diversion dam would be built upstream and stream flow piped around the worksite and discharged into the stream below the work-site.
- It is anticipated that most of the work will occur outside of the rainy season (June 1st to October 15<sup>th</sup>). On roads where potential sediment delivery to streams exists, construction

activities after October 15th would proceed using conditions established by the National Marine Fisheries Service (NOAA Fisheries) during consultation for the Army Corps of Engineers permit obtained by DFG for this project. This work will also be conducted in a manner consistent with conditions applied by NOAA Fisheries to similar projects located on nearby federal lands.

- If periods of dry weather are predicted after October 15<sup>th</sup>, small additional work items may be done with DFG approval, if they can be completed within the window of dry weather. DPR will have materials to sufficiently mulch bare work areas on-site at all times. Work would be conducted with weekly consultation with DFG regarding weather forecasts and streamflow conditions. Work would be conducted so that no more than one-half day would be required to finish all earth moving and mulching work. All access roads would be winterized prior to any additional earth moving tasks.
- Streams and riparian zones will not be used as equipment staging or refueling areas. Equipment will be stored, serviced and fueled away from riparian areas. Heavy equipment will be cleaned (e.g., power washed, steam) prior to use below the ordinary high water mark.
- Any disturbed soil adjacent to stream channels would receive evenly distributed mulch coverage with masticated brush and trees to reduce sheet erosion. Coverage would be 70% to 90% adjacent to the stream or where no native mulch buffer exists between disturbed soil and a stream channel. Mulch will consist exclusively of native slash generated during the clearing phase of the rehabilitation work.
- DPR will ensure that routine road maintenance is performed on or before October 15th on all non-decommissioned road segments used to access the project sites, unless DFG approves limited project work beyond October 15th.
- DPR will ensure that contract(s) associated with the project contain all of the relevant BMPs, and other descriptions of sideboards and measures identified in this MND and in other documents associated with consultations for this project as necessary to avoid or minimize incidental take of SONCC coho salmon. If DPR determines that the contractor is not in compliance with the project contract, and non-compliance could result in greater effects than previously anticipated to SONCC coho salmon, DPR will contact DFG to discuss the need for additional measures to minimize impact.

### **Mitigation Measures Bio-3 (Birds)**

- Prior to operations the DPR inspector would be instructed in the identification of raptor nests (both occupied and unoccupied) and raptor breeding behavior. During operations the inspector would be responsible for assuring that no raptor nests are impacted by the proposed treatments.
- If an unoccupied raptor nest is detected then the nest tree would not be disturbed and the location reported to the Sector Resource Ecologist.
- If an occupied raptor nest is detected in the project area, then the DPR inspector would cease operations within ¼ mile of the raptor nest and immediately notify the Sector Resource Ecologist. The Sector Ecologist will consult with DFG on site specific and species-specific mitigation measures. Any such changes would be amended into the MND, if necessary. Nests that are outside of the project area but that occur within a ¼ mile will be protected with a

no-noise disturbance zone that excludes operations within it from February 01 through August 31..

#### **Mitigation Measures Bio-4 (Trees)**

- Trees to be retained will be identified (marked, flagged, or otherwise indicated) prior to the start of work and avoided during construction activities.

#### **Cultural Resources**

##### **Mitigation Measures Cult-1**

- A site-specific Cultural Resource investigation will be conducted to locate potentially significant historical resources prior to the start of ground disturbance in any location, in compliance with Public Resources Code (PRC) 5024.5. A report will be prepared by a DPR-qualified Archaeology consultant, under direct oversight by the District State Park Historian.
- No excavation would occur within identified site boundaries. Sites will be avoided to the extent feasible and/or capped, as recommended by the Cultural Resource investigation referenced above. A DPR-qualified cultural resource specialist would monitor the identified sites when equipment travels across the site to access other project areas, or fill is being placed to cap the site. A witness layer of geotextile fabric would be placed on the existing ground surface prior to any fill being placed on an identified site.
- In the event that previously undocumented cultural resources are encountered during project construction (including but not limited to dark soil containing shellfish, bone, flaked stone, groundstone, or deposits of historic trash), work within the immediate vicinity of the find would be temporarily halted or diverted. Work would not continue at the site until a DPR-qualified cultural resource specialist has evaluated the find and implemented appropriate treatment and disposition of the artifact(s).
- Once any significant cultural resources are found in a project location, a DPR-qualified historian, archaeologist and/or appropriate Native American Tribal representative(s) would monitor any ground-disturbing work in that area from that point forward.

##### **Mitigation Measures Cult-2**

- In the event that human remains are discovered, work would cease immediately in the area of the find and the project manager/site supervisor would notify the appropriate DPR personnel. Any human remains and/or funerary objects would be left in place or returned to the point of discovery and covered with soil. The DPR Sector Superintendent (or authorized representative) would notify the County Coroner, in accordance with §7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (NAHC) or Native American Tribal representative. If a Native American monitor is on-site at the time of the discovery, the monitor would be responsible for notifying the appropriate Native American authorities.

If the coroner or tribal representative determines the remains represent Native American interment, the NAHC in Sacramento and/or tribe would be consulted to identify the most likely descendants and appropriate disposition of the remains. Work would not resume in the area of the find until proper disposition is complete (PRC §5097.98). No human remains or funerary objects would be cleaned, photographed, analyzed, or removed from the site prior to

determination

If it is determined the find indicates a sacred or religious site, the site would be avoided to the maximum extent practicable. Formal consultation with the State Historic Preservation Office and review by the NAHC/Tribal Cultural representatives would also occur as necessary to define additional site mitigation or future restrictions.

## **Geology and Soils**

### **Mitigation Measures Geo-1 (Erosion Control)**

- Best Management Practices (BMPs), consistent with RWQCB and State Park requirements, would be used in all areas to control soil and surface water runoff during excavation and any grading. If storms are anticipated during construction, "winterizing" will occur, including the covering (tarping) of any stockpiled soils and the use of temporary erosion control methods to protect disturbed soil. Temporary erosion control measures (BMPs) must be used during all soil disturbing activities and until all disturbed soil has been stabilized (recompacted, re-vegetated, etc.) These BMPs will include, but not be limited to, the use of silt fences, straw bales, or straw or rice coir rolls, to prevent soil loss and siltation into nearby water bodies.
- Permanent BMPs for erosion control will consist of properly compacting disturbed areas and revegetation of appropriate disturbed soil areas with native species. The State's contractor is responsible for providing the planned BMPs for DPR review and approval prior to the start of work.

### **Mitigation Measures Geo-2**

- All workers would be advised of high-risk areas and cautioned to use extreme care while working in those areas.
- All heavy equipment operators would be required to have experience working in conditions similar to the proposed project.
- A qualified inspector, trained in landform rehabilitation, would monitor equipment operation.
- Hand crews or other workers on the ground would be required to position themselves upslope of sites where excavations are actively under construction.
- Potentially unstable slopes that may occur naturally or result from the earthmoving process would be identified at the start of work and heavy equipment operators would be cautioned to minimize their exposure to these areas. Inspectors would continually evaluate slope geometry and caution operators if unstable conditions are indicated.

## **Hazards and Hazardous Materials**

### **Mitigation Measures Hazmat-1**

- All equipment would be inspected for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from park premises. Leaks that develop would be repaired immediately in the field or work with that equipment would be suspended until repairs could be made.
- An emergency spill response plan would be prepared prior to the start of construction and a spill kit maintained on-site throughout the life of the project, or provides multiple sets of cleanup

materials to each crew, if sharing would prevent timely implementation of cleanup plans. In the event of any spill or release of any chemical in any physical form on or immediately adjacent to the project sites or within the MCA during construction, the contractor would immediately notify the appropriate DPR staff (e.g., project manager or supervisor) and implement the spill response plan. Appropriate agencies would be notified in the event of significant spillage.

- No maintenance or fueling activities would be permitted within 200 feet of a stream.
- Equipment would be cleaned and repaired (other than emergency repairs) outside the park boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds would be disposed of outside park boundaries, at a lawfully permitted or authorized destination.

#### **Mitigation Measures Hazmat-2**

- If there is evidence of spillage from or free product discovered on or adjacent to the project sites, work would be halted or diverted from the immediate vicinity of the find and the Sector's hazardous materials coordinator would be contacted. Removal of all contaminants, including sludge, spill residue, or containers, would be conducted following established DPR procedures and in compliance with all local, state, and federal regulations and guidelines regarding the handling and disposal of hazardous materials. Work would not resume until required avoidance and/or mitigation measures have been identified and implemented.
- Abandoned vehicles located within the project sites would be removed and disposed of under the supervision of the hazardous materials coordinator. Any associated fuel or hazardous materials would be handled in a manner consistent with the spill plan and/or requirements indicated above.

#### **Mitigation Measures Hazmat-3 (Fire Safety Plan)**

- A fire safety plan would be in place prior to the start of any construction, including availability of identified fire suppression equipment and any required employee training.
- Spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers would be required for all heavy equipment.
- Construction crews would be required to park vehicles away from flammable material, such as dry grass and brush. At the end of each workday, heavy equipment would be parked over mineral soil to reduce the chance of fire. All equipment would be required to be mechanically sound and free of flammable debris.
- Park staff would be required to have a State Park radio on site, which allows direct contact to California Department of Forestry and Fire Protection and centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire.

### **Hydrology and Water Quality**

#### **Mitigation Measures Hydro-1**

- Cutbanks exposing seeps or springs would not be recontoured. Instead, the embankment fill adjacent to the wet area would be exported to nearby dry sections of the road. An outsloped cutbench would extend along all wet road sections. No vegetation would be removed within 25 feet of a spring that emanates from a cut slope.

- If a long section of road were not suitable for full recontouring, the excavator would remove the embankment fill and load it into a dump truck to be end-hauled to a stable location on a nearby site proposed for recontouring. The excavator and dozer recover the entire embankment fill and outslope the cutbench of the road. On steep linear road grades, broad swales would be constructed along the road at appropriate locations to convey flow into natural drainage features below the road.
- Road sections immediately adjacent to stream crossings would not be fully recontoured. Instead, the fill would be tapered toward the crossing and the cutbank laid back to a more stable slope. This reduces the slope on each side of the crossing, decreasing the chance for direct sediment delivery if a post-treatment slope failure should occur.
- If the stream has running water, it would be diverted away from excavation areas to reduce turbidity and returned to the channel immediately downstream. Where channel widths are wide enough, a berm would be constructed to divert water away from the work area. Where channels are narrow, a small diversion dam would be built upstream and stream flow piped around the worksite and discharged into the stream below the worksite. Instream filters would be installed where diversion is not possible. The project inspector would carefully monitor the structures to prevent failures.
- If the crossing has already partially failed, a small road bench would be reconstructed along the upstream end of the crossing to allow access to both sides of the crossing. A minimal amount of fill would be used and streamflow (if present) piped around the site or a culvert installed to convey streamflow under the temporary road.
- Logs and rocks would not be placed in the excavated channel because they cause lateral migration resulting in bank erosion. Instead, logs would be placed on the channel margins or span the removed crossing.
- All temporary berms, ponds, and piping would be completely removed at the completion of construction.

#### **Mitigation Measures Hydro-2**

- Following October 15<sup>th</sup> of any work year, any roads remaining open to service vehicles would be winterized by installing rolling dips at all stream and swale crossings; portions of the outside berm would be removed to allow drainage and any unstable fill would be pulled back from stream crossings.
- Following October 15<sup>th</sup> of any work year, work would not proceed in any area where soils have become saturated. Construction work would generally be limited to the dry periods of the year, when rain is unlikely.

- All stream crossing sites will be photo-documented following treatment to enable rough-estimate, quantitative assessment of post-treatment adjustments. All stream crossing sites will be reviewed in the field during the first winter following treatment to identify any deficiencies in treatment or treatment techniques.

## **Noise**

### **Mitigation Measures Noise-1**

- Construction activities would generally be limited to the hours between 6 a.m. and 6 p.m.
- Internal combustion engines used for any purpose at the job site would be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for construction would utilize the best available noise control techniques (e.g., engine enclosures, acoustically-attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.
  - Stationary noise sources and staging areas would be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources would be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds

## Chapter 6

### References

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- Jones and Stokes Associates, 1995, The Status of Wildlife and Fisheries Resources on Miller Timber Company Lands, Del Norte County, California.
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- Spreiter, T., 1992, Watershed Restoration Manual: Redwood National Park, 39p.
- Weaver, B. and Hagans, D., 1994, Handbook for Forest and Ranch Roads: Pacific Watershed Associates, 161p.

#### Internet Resources

Best Management Practices for Road Removal, North Coast Redwoods District – California State Parks can be found at: [www.parks.ca.gov](http://www.parks.ca.gov)

Water Drafting Specifications (2001). National Marine Fisheries Service, found at <http://swr.nmfs.noaa.gov/hcd/WaterDrafting-02.htm>

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